CONFIDENTIAL

OSS
CONFIDENTIAL
C.I.D. ~~121455~~

097.3
Z1092
No. 153

JOINT CHIEFS OF STAFF

OFFICE OF STRATEGIC SERVICES

Western European Section

DEPARTMENT OF STATE
REFERENCE DIVISION
FILE COPY
PLEASE RETURN
REF.

R&A #753, vol. 1

R&A #753

FRANCE

Material for Sections III, IV, and V

of a Projected [redacted]. Survey

Volume I - Text

July 1, 1942

Copy No. 1)(

.1470)

CONFIDENTIAL

FRANCE

TABLE OF CONTENTS

Page

SECTION III. - POPULATION AND SOCIAL CONDITIONS

15. General 1
16. Population 8
17. Ethnic and Social Groups 12
18. Language 15
19. Characteristics of the People 17
20. Living Conditions 21
21. Labor 25
22. Public Health 28
23. Education 29
24. Religion 34
25. Public Order and Police 37
26. Press, Propaganda and Censorship 41

SECTION IV. - POLITICAL

27. General 44
28. Government 46
29. Political Parties 63
30. Foreign Policy and International Relations. 77

SECTION V. - ECONOMIC

31. General 82
32. Manufacturing 89
33. Utilities 152
34. Railroads 156
34^{1}. Inland Waterways 160
35. Roads 168
36. Shipping 172
37. Commercial Aviation 178
38. Commerce 180
39. Communications 184
40. Finance 190

Section III.

POPULATION AND SOCIAL CONDITIONS

15. General

a. History.

The political history of France since the French Revolution of 1789 has been essentially the history of the rise and decline of republicanism. In the economic field the development of modern transportation and industrialization have been of first importance, and in social history the growth of cities, the rise of the labor movement, and the adoption of social legislation were outstanding developments.

(1) French Revolution and Napoleon.

The first stage of the Revolution established a constitutional monarchy, but it gave way in 1792 to the First French Republic. In 1795 a new form of republican government was established only to fall when Napoleon took personal control of the government in 1799.

(2) Bourbon Restoration and July Monarchy.

After Napoleon's overthrow in 1814 the monarchy was restored, and a Bourbon, Louis XVIII, was placed on the throne of France. He, however, granted a constitution which provided for a parliament, and when his successor, Charles X, tried to govern without it in 1830 he was deposed by the liberal monarchists aided by the republican workers. Neither the republicans nor the liberals were satisfied with the policy of the new king, Louis Philippe, for he suppressed the republican organizations and made himself increasingly independent of parliamentary control. His policy led to his overthrow in 1848, and to the establishment of the Second French Republic.

(3) Second Republic.

The Second Republic began as a radical political experiment, but gradually it became more conservative and alienated the radicals without winning the confidence of the right. Louis Napoleon

Bonaparte, nephew of the first Napoleon was elected president of the Republic in 1848; and taking advantage of the weaknesses of the Republic, he seized personal power in 1851. In the following year, he proclaimed himself Emperor.

(4) Second Empire.

Under the Second Empire France experienced a form of proto-fascist dictatorship characterized by vigorous suppression of liberal opposition, an active foreign policy, and energetic promotion of economic activities. In its second decade the Empire lost prestige through its diplomatic reverses, and as its rule became more lenient and liberal, the opposition groups, particularly the republicans, grew in strength and confidence. When, in 1870, the Emperor was captured and his armies defeated by the Germans, the Empire was overthrown without resistance and the Republic provisionally proclaimed.

The Second Empire is an important period in French economic history. With the government's backing the national railway network was completed in its essentially contemporary pattern. The great commercial banks of France were established, and the introduction of a free trade regime in 1860 marked a sharp change in French commercial policy and forced backward French industrialists to modernize their plants to meet outside competition. The Empire also saw the beginning of the great shift in population from the country to the cities and the first stirrings of an organized labor movement.

(5) Third Republic.

(a) 1870-1918.

The National Assembly, elected to conclude peace with Germany, undertook to give France a new government before disbanding. The monarchist members were in the majority, but they were divided over the question of a candidate for the throne, and step by step over a period of four years they established a conservative republican constitution. In 1876 the rule of the National Assembly came to an end, and the new constitution went into effect. The history of France in the next three decades centered around the struggle for the firm establishment of the Republic and the repeated attacks of the conservatives upon it. The attempt of President Mac Mahon to assert his personal power over the legislature in 1877 was frustrated, and the threat of a military dictatorship by General Boulanger was successfully passed in 1889. The latter success strengthened the Republic, but it was seriously compromised and its enemies comforted in 1892-93 by the Panama Scandal, in which several high officials were implicated. In the late 1890's and the early years of the twentieth century, the Dreyfus Case, involving the question of the guilt of a Jewish army officer accused by the General Staff of espionage, openly ranged all the liberal and republican forces on the one hand against the reactionary forces of the Army, the Church, and the nobility on the other. The vindication of Dreyfus brought prestige to the left and discredited their opponents; and in the first years of the new century the republicans, securely in power, purged the reactionary elements from the armed forces, banned clerical schools and religious orders, and concluded the separation of Church and State. The Republic was now firmly established politically; and the victory in the World War, which made France once again the first nation in Europe, brought the Republic to the apogee of its power and prestige.

Under the Republic French economy continued to develop along the lines noted under the Empire. The only exception was the abandonment of free trade and the adoption of a high protectionist policy, a policy which the Republic never abandoned. Railroad mileage was increased, and in a great program of public works the State built and improved many miles of inland waterways. In the industrial fields outstanding developments were the opening up of the Briey iron fields on the eastern frontier and the consequent growth of the French iron and steel industries, the technical transformation of the textile industries by the adoption of mechanical power, and the beginning of the new automobile and electrical industries. Industrial concentration was, however, unusually limited, and the small workshop remained the typical establishment. Organized labor became a political force during these years; labor unions were legalized, and they joined in regional and national federations for united effort. Several socialist parties won the support of workers for political action.

(b) 1918-1936.

In the post-war decade France's principal concerns were with the problem of assuring security against German aggression, meeting the expenses of reconstruction, and devaluing the franc. Cabinets were made and dissolved over these questions, but the Republican government ultimately met the problems satisfactorily and maintained its prestige in France and abroad. In the early 1930's, however, the economic depression finally made itself felt in France. A menacing new regime arose in Germany, and the French government appeared quite ineffectual. The Republic bagan to fall into disrepute, and the rightist organizations found wide-spread support for their anti-republican programs. To combat the fascist threat to the Republic the left wing groups combined, and their coalition brought to power in 1936 the Popular Front Government. It embarked at once on a far-reaching program of liberal social and economic reforms which, though needed, served to alienate the propertied classes from the Republic and to divide French society at a time when national unity was a vital necessity.

After the World War the most pressing economic problem for France was the need of paying for the war and reconstruction and of maintaining the value of the currency. In 1936, after the franc had fallen to a tenth its nominal value, it was officially devalued by four-fifths; and 80 per cent of the national debt was thus repudiated. Even this value could not be maintained, however, through the depression of the 1930's; and in 1937 the franc was again diminished in value. Working class political parties continued to grow in power, and they influenced the economic and social policy of the government. A comprehensive social insurance law was adopted in 1930, but it was in 1936 with the advent of the Popular Front Government that liberal social and economic reforms sought by the liberals and leftists were

(1470)

instituted on a large scale. The forty-hour week, vacations with pay, compulsory arbitration of labor disputes, and nationalization of the Bank of France, the munitions industry, and the railroads were among the measures adopted in quick succession.

b. The Contemporary Social Scene

(1) People, language, and characteristics.

France has at present a population of 41,000,00 divided about equally between urban and rural settlements. The French people are a mixture of the principal European racial types, for the migrations of many centuries have brought a variety of ethnic groups onto the national territory. The foreign-born population, composed largely of Italians, Belgians, Poles, and Spaniards, has always been large in recent decades, and in the 1930's it was augmented by the influx o refugees from central Europe. Socially the country is a nation of peasants and industrial workers, with the peasants still equal numerically to the workers. The French language is a unifying bond across the differences of racial origin and class distinctions; German, Flemish, and Celtic are spoken by small elements of the population, and some local dialects are almost distinct languages, but French is used and understood throughout the metropolitan area.

As a people the French are characterized by their intelligence and rationalism, their conviction of the unquestioned superiority of French civilization, and their individualism. Their traditions are varied, and in them the Frenchman can find support for a wide variety of political, economic, religious, and cultural interests. The people are generally competent to govern themselves, and when properly led and convinced of the justice of their cause, they are excellent soldiers. As workers and artisans they are famous for their skill in producing fine and artistic work, and they are capable of carrying out all the specialized tasks of modern industry.

(2) Living Standards and Labor.

The standard of living has dropped seriously since 1940. Sufficient food to provide proper nourishment and adequate supplies of fuel and clothing are not available to most of the population. Prices have risen sharply, despite price-fixing and rationing, and wages have not increased proportionately. The working classes in the cities have suffered most seriously, and with their labor unions dissolved or restricted, and deprived of political representation, they have no effective means of protest and redress.

(3) Education and Religion.

The French have long had a comprehensive school system, and they are a highly literate people, less than 5 per cent being recorded as illiterate in the 1930's. The state schools, under the Vichy Government as under the Republic, provide compulsory free primary education for all and free vocational training for specially qualified students. Vichy has, however, reversed the republican policy of providing free secondary education to all students and reintroduced tuition fees in the public secondary schools. It has also broken the republican tradition of lay education by including religious instruction in the curriculum and granting public funds to church schools.

Catholicism is the dominant religion of France and it has had great cultural and political influence on the life of the nation. Under the Republic the Church was in serious disrepute for its association with the most reactionary political groups of the nation, and it is today in good favor with the Vichy Government; but the younger clergy and the Catholic youth movements are gaining prestige as exponents of resistance and liberal ideas. The Protestants are a small group but enjoy complete freedom. Jews, on the other hand, are persecuted and their activities closely restricted. In the days of the Republic, the Free Masons represented the great rational and anti-clerical tradition in France, but they have been disbanded by the present government.

(4) Police and Censorship.

Since the present French Government does not rest on popular consent, it has sought to safeguard its position by establishing a strict control over the nation's police and over the dissemination of information to the people. All French police in towns of more than 10,000 inhabitants have been placed under the direct authority of the Ministry of the Interior, and a new national police school has been opened to train national police agents. The press is censored, broadcasting is controlled, and listening to radio programs is closely restricted. Several clandestine newspapers hostile to the regime are published, however, in defiance of the police.

16. Population

a. Total Population

The population of metropolitan France in 1936, the year of the most recent census, was 41,907,000. Of this number 2,453,500, or 5.85 per cent, were foreigners and 39,453,500 were native or naturalized Frenchmen. Early in 1941 it was estimated that there were about 26,000,000 people in German-occupied France and about 15,000,000, including refugees, in the unoccupied zone. Approximately 1,250,000 Frenchmen are now German prisoners of war.

b. Density of Population

According to the census of 1936 the density of population in France is greatest in the vicinities of the large cities: Paris, Marseille, Lyon, Strasbourg, Le Havre, Rouen, Nice, St. Étienne and Nantes, in the industrial and mining regions of the north and east, in Brittany, and in the departments along the coast of the English Channel. The areas of least dense settlement are in the mountainous regions of the south-east and the central plateau, the Garonne Valley, and certain departments of the east (Aube, Haute-Marne, Meuse, Nièvre, and Yonne).

c. Urban Population

In 1936, 52 per cent of the population lived in cities or towns of 2,000 or more inhabitants and 48 per cent in rural areas. Sixteen per cent of the population were in cities of more than 100,000 inhabitants, and 23 per cent in cities of more than 50,000. France has only one very large city, Paris, which, with its suburbs, has a population of some 5,000,000, but in 1936 there were sixteen other cities, of which the population exceeded 100,000; they were:

Marseille	914,232
Lyon	570,622
Bordeaux	258,348
Nice	241,916
Toulouse	213,220
Lille	200,575
Nantes	195,185
Strasbourg	193,119
St. Étienne	190,236
Le Hâvre	164,083
Toulon	150,310
Rouen	122,832
Nancy	121,301
Reims	116,687
Roubaix	107,105
Clermont-Ferrand	101,128

France also had in 1936, 39 cities with 50,000 to 100,000 residents; 52 with 30,000 to 50,000; 78 with 20,000 to 30,000; and 218 with 10,000 to 20,000.

d. Composition of the population by age and se

The distribution of the population by age and sex in 1940 has been reliably estimated to be as follows:

Age	Men (thousands)	Women (thousands)	Total (thousands)
0-5	1,410	1,400	2,810
5-10	1,600	1,580	3,180
10-15	1,770	1,730	3,500
15-20	1,640	1,590	3,230
20-25	1,220	1,190	2,410
25-30	1,510	1,490	3,000
30-35	1,660	1,610	3,270
35-40	1,670	1,620	3,290
40-45	1,450	1,550	3,000
45-50	1,150	1,430	2,580
50-55	1,090	1,340	2,430
55-60	1,010	1,250	2,260
60-65	929	1,120	2,050
65-70	757	927	1,680
70-75	532	703	1,240
75-80	323	466	789
80-85	140	233	373
85 +	45.9	96.8	143
TOTAL	19,900	21,300	41,200

The significant peculiarities of this distribution are: 1) the unusual smallness of the 20-25 years age group, which is composed of persons born during the first World War and immediately after; and 2) the smallness of the male groups over the age of 40, which were greatly reduced by deaths in the first World War.

c. Men of military age

The total number of men of military age (15 to 65 years) in France before the campaigns of 1940 was 13,300,000. About 130,000 were killed in the present war, and some 1,250,000 are now prisoners of war in German hands.

17. Ethnic and Social Groups

a. Introduction

The French people are a mixed conglomeration of the chief races of Europe, the Alpines, Nordics, and the Mediterraneans, and an unknown number of pre-historic races. This is a fact which to them is frequently a source of pride and satisfaction, and consequently of some political significance in the development of the nations. The French Nation, in the eyes of the inhabitants, is the natural result of the blending of many races which penetrated France in hostile invasion hordes or in migratory movements seeking refuge in the fertile geographical area of what was once known as Gaul, but now known as France.

b. Early Settlers

At an unknown epoch before Christ, the Celts marched westward from the plains of Central Asia and advanced to the shores of the Atlantic. Brittany, where their language is still spoken, and Ireland became part of their domain. Before their arrival, the Iberians had established themselves in Gaul, but were pushed back south of the Garonne River; their language, the Basque, is still spoken in the Pyrenees.

c. Roman Conquests

During the period of 125 to 50 B.C., Gaul became the battle-ground of Roman legions and native tribes. The Roman domination never became quite firmly established, however, until the arrival of Caesar who waged victorious battles during the period of 58 to 50 B.C., followed by the establishment of numerous Roman colonies, and the reduction of Gaul into sixty municipalities. With the conquest and pacification of Gaul, Roman political, religious, cultural, and linguistic influences became all important in establishing the territory as an integral part of the Roman Empire.

d. Barbarian Invasion

The Roman Empire had existed four centuries, but in 286 A.D. a body of Franks, a Germanic tribe, crossed the Rhine and traversed the whole of Gaul. However, the great invasion of Franks did not begin until 368 A. D. Other Germanic invasions of Visigoths, Goths, Vandals and Huns started in 406, but it was not until 507 A.D. that the Frankish King, Clovis, had established supremacy over the greater part of the other invading tribes. The ensuing strife was reduced to battles between rival groups within the boundaries of the former Roman domain.

e. Present Ethnic Groups

With the rise of Mussolini in Italy and of Hitler in Germany, France became a country of refuge for many persecuted minorities, political groups, and personalities. Some 40,000 Jewish refugees are estimated to have entered the country from Germany, Austria, and Czechoslovakia from the rise of Hitler to the outbreak of war in 1939. Another 50,000 are reported to have stampeded before the victorious German Army in 1940. Allowing for a certain margin of error, the aggregate number of Jews may be said to be about 340,000. In 1931 the total foreign population of France numbered about 2,850,000. Of this number 830,000 were Italians who had settled, for a large part, in the south of France. There were 465,000 Belgians, 452,000 Poles, and 360,000 Spaniards. Important special language groups are composed of the large sections of the Alsace-Lorraine population, speaking German. There are also Flemish speaking population in the Departments of the Nord and Pas de Calais, as well as the Celtic language groups in Brittany.

f. Social and Political Divisions

The following chart is an estimate of the social and political groups into which the various Franch classes are divided, giving an approximate figure in each case:

SOCIAL AND POLITICAL STRUCTURE OF FRANCE

(Estimates of Pierre de Lanux)

Classes	Conservative and Catholic Tradition	Democratic Tradition	Socialist and Revolutionary Tradition	Totals
Wealthy Classes	400,000	100,000		500,000
Intellectual Classes ... Professions	100,000	900,000	500,000	1,500,000
Middle Class ... Well-to-do Farmers	4,000,000	1,000,000		5,000,000
Craftsmen ... Individual Workers	500,000	3,000,000	500,000	4,000,000
Bulk of Industrial Workers	1,000,000	5,000,000	9,000,000	15,000,000
Bulk of Agricultural Population ... Fishermen, etc.	7,000,000	5,000,000	3,000,000	15,000,000
Totals	13,000,000	15,000,000	13,000,000	41,000,000*

*This total does not include prisoners of war, refugees abroad, etc.

18. Language

The language known as French is spoken and recognized throughout France as the national tongue--even where regional dialects are frequently spoken.

The French language has been developed from a Gallo-Roman dialect originating in the region of Paris. It spread with the expansion of the French state, and became the language of the government, the courts, the army, the schools, commerce and literature--with each new annexation by the Kings of France.

In spite of its acceptance as the national tongue, however, regional languages have been in use, and continue in use today, often reflecting the characteristics and background of the section where they are spoken. This is frequently the case in provinces which have resisted complete nationalization in a cultural sense, but which have, nevertheless, become definitely French in a political sense. These languages conform to the racial distinction and tradition in the areas where they are spoken. Such is the case in Celtic Brittany, with the Teutonic Flemish in Artois, and with the German of Alsace-Lorraine. It is the same with the Basque dialect of the Pyrenees, and the Italian dialect of Corsica. As the Frenchmen of these areas maintain a deep sentimental attachment to their pays, as the areas are frequently called, so they are often found using their native tongue to the exclusion of the national language for the same sentimental reasons.

Of all the countries of Europe, France is probably the country where English is most widely spoken. Since the war of 1914-1918, and particularly during the period of the great tourist trade which developed in the post-war years, English has been taught in the schools. Although the number of people with a truly wide knowledge of the language is probably limited, it is, nevertheless, frequently possible to find people who are able to converse in English with a fairly practical knowledge. There should be no difficulty in being able to locate and employ the service of interpreters.

19. Characteristics of the People

a. Temperament

The French have, first of all, a developed and instinctive intelligence of considerable note. It is a fact, however, of which they are distinctly aware and of which they are very proud. They are quick to come to conclusions, and it is a fact that a Frenchman usually has an answer in his head, whether right or wrong, for almost every human problem in existence. They are not sentimental, and cannot generally be expected to be motivated by sentimental reasoning. They are filled, however, with all kinds of sentiments to which they give vent in emotional and passionate expression frequently qualified, nevertheless, by a sense of proportion, and an acute sense of justice.

b. Influences of Traditions and Customs

All Frenchmen, in the past, have taken it for granted that France is the leader and champion of the world's civilization, and this belief, aside from normal patriotic motives, is undoubtedly, even in moments of civil upheaval and strife, one reason for a passionate love and devotion to France held by the great masses. All political groups in France, whether Royalist, Republican, Socialist, or even Communists, are fundamentally loyal to what, perhaps, is their own conception of France, but nevertheless France. In this respect, tradition plays an important part in French life.

There are a great many traditions in France. There is the monarchist tradition, dating back to the long line of Bourbon Kings of the 19th, 18th and

17th centuries. There are the mystical and religious traditions dating back to Joan of Arc, and the belief in France's position as the "eldest daughter of the Church". There are the great traditions of "Liberté, Egalité, Fraternité" which date from the French Revolution at the end of the 18th century. There are the Napoleonic traditions of military and political conquest and expansion. There is a great colorful tradition dating back to the discoveries in America and more recently to colonization in the Near East, the Far East, the Pacific, in Africa and the Indian Ocean. And there are cultural and economic traditions, the one considering itself as following in the footsteps of the great French artists and writers, and the other divided between the tradition of the hardworking farmer and peasant and the tradition of the country par excellence of delicate hand-work and luxury manufacturers. Each of these traditions has a tremendous importance in French life for the very reason that all French society is divided into groups, or even castes, who vehemently consider themselves as the defenders of their particular tradition and as responsible for its continuation.

c. Military Activity

The French have as great a military tradition behind them as any nation, a tradition based upon their ability to be the equal, if not, at times, the superior, of any continental soldier. However, the defeat of French arms in the War of 1870 by Germany, revenged though it was by the victory of 1918, and the subsequent defeat in 1940 have decidedly weakened that tradition; it rests with the future to determine whether France's former reputation and ability have been fundamentally broken.

d. Respect for Authority

The French, in spite of their deep-seated patriotism and loyalty to tradition, are one of the most individualistic people in the world. It can probably be said that a Frenchman's respect for authority is dependent upon the authority's respect for the individual Frenchman's right and prerogatives. French society is governed by law, and it is the written law and order which command the Frenchman's respect, and not the individual ruler's whims and fancies.

e. Political Capacity

The greatest tradition of French political life for the last one hundred years has been the republican one. The French Revolution gave birth, on the continent of Europe, to a new set of ideas regarding the rights of man and his relations with his fellow citizens and established authority. That new set of ideas spread all over the world and finally resulted in the establishment of a parliamentary republican government in France in 1875, and which remained in power until 1940. The fact, however, that this government ended in the greatest disaster to France in modern times should not be taken as a guarantee that a similar system will not be reestablished after the war.

f. Attitude toward the United States

The French people are definitely pro-American for practical as well as for sentimental reasons. Ever since the war of the American Revolution a bond of mutual sympathy has existed between the two peoples. In 1917 this bond became a real friendship, but friendship established more, perhaps, on mutual interests and institutions than on a real understanding because of the fact that there are very decided differences in the temperaments of the two nations. Today the great majority of the French people look upon America as the means to their salvation and they would welcome it as such. On the other hand, being a formerly prosperous and powerful nation, they may show envy and jealousy at America's favorable geographical and economic position, tinged with a certain amount of xenophobia.

20. Living Conditions

a. Standard of Living

Before the present war the standard of living in France was high for a European country. There were sharp extremes of wealth and poverty between the very rich and the poor industrial workers; but the peasants, the largest occupational group, were generall prosperous and, if they chose, could maintain a comfortable living-standard. Since the Armistice of 1940, however, living standards have dropped sharply in all classes owing to shortages of food, clothing, and fuel, and the inability to distribute available supplies. Efforts at price control have been ineffective, and even official retail prices have risen greatly over the levels of 1939. Employment has been reestablished at a high level, there being fewer than 300,000 unemployed in the latter months of 1941; but wages have not been increased in the same proportion as prices, and in the lower scales they are not sufficient to purchase even the necessities of life.

(1) Food.

The legal rations are small, and they are not always actually available. In December, 1941, the daily legal rations for an adult were as follows:

Bread	9.7 ounces
Fats	0.5 "
Sugar	0.5 "
Cheese	0.25 "
Meat	1.25 "
Potatoes	5.0 "
Dried vegetables, rice and macaroni	5.0 "
Wine	1 liter per week (1 liter =1.06 quarts)

These quantities are not sufficient to satisfy a normal appetite, maintain working efficiency, or afford protection against disease. Persons who have the means, supplement their rations by purchases of the few unrationed foods and by buying on the "black market", and peasants keep enough of their production for their own use. In consequence, there is great variation of feeding standards among different classes.

Wealthy people can get plenty of the principal articles of food on the "black market", and some of them eat as well as in pre-war years. In agricultural districts food is often plentiful and, with transport lacking to distribute it, the peasants generally keep many times their legal ration and are thus well provided. The less affluent classes in the cities and towns have suffered most, for supplies have been shortest there, and these people lack means to buy unrationed foods or to deal on the "black market".

Undernourishment has affected a large part of the population. An official of the Vichy Government stated in the autumn of 1941 that normal adults have lost 12 to 20 pounds since the Armistice. The adult mortality rate was up 22 per cent over pre-war levels in the first five months of 1941, and among persons over 60 years of age the rate increased 43 per cent. In Paris child mortality in 1941 was 45 per cent over the peacetime average.

(2) Clothing, shelter, and fuel.

Shoes and clothing are rationed, and the rations are difficult to obtain and far short of normal requirements. At the fashionable dress-making establishments in Paris, however, persons with the necessary means can obtain any articles of women's clothing except pure woolen goods.

The allowance of coal is inadequate for even restricted heating at a healthful standard, and a ban on the transportation of wood prevents the obtaining of supplementary fuel for domestic establishments from this source. Gas is generally available only for a few hours a day at meal times, and then only at reduced pressure.

b. Social Security Legislation

(1) Social Security under the Third Republic.

In the decade before the present war the French Government instituted a comprehensive system of social security, which embraced some earlier legislation and instituted several new services. Compulsory social insurance for all workers earning no more than 25,000 francs ($625 in 1939) annually provided old-age pensions,

pensions to dependents in case of premature death, medical care and allowances during illness and pregnancy and nursing periods, disability pensions, and unemployment allowances. The costs were borne by assessments on workers and employers and by contributions from the State, and the administration was shared by national and local authorities. Unemployment insurance provided under the national social security system was inadequate in the depression of the 1930's, and the main burden of relief was carried by departmental and municipal relief offices, which obtained financial aid from the central government.

A law adopted in the 1930's required employers to pay supplementary wages to employees with two or more children, and the amount was increased with each additional child.

(2) Social Security under the Vichy Government.

The Vichy Government has made only minor alterations in the social security legislation of the Republic. The national social insurance system has been extended to all persons earning wages or salaries, and all unemployment insurance has been brought under the national organization. Wives of insured workers now receive the same allowances for nursing mothers as do insured women workers. Old-age pensions have been provided for all persons over 65 years of age who do not receive a certain minimum income. Supplementary wages for workers with children have been increased, and a special allowance has been granted to workers who are the sole source of income in a family.

1. Labor

a. Industrial Capacity of Workers

French workers are famous for their exacting work on fine and artistic products, but their skill is not confined to such production. They are quite able, when properly trained, to carry out skillfully any of the specialized tasks of modern industrial production, and many are trained and experienced in such work.

b. Skilled Labor available for hire

(1) Pre-War Situation

The most recent published census of occupational groups in France (1931) gave the number of workers employed in various specialized branches of industry requiring skilled labor as follows:

	Men	Women	Total
Coal mining	299,710	9,000	308,710
Iron mining	36,850	260	37,110
Chemical industries	184,610	53,690	238,300
Printing and Engraving	92,580	32,610	125,190
Textile industries	370,420	555,040	920,460
Clothing industries	89,600	502,870	592,470
Wood working industries	592,610	56,660	649,270
Metallurgical industries	166,000	7,230	173,230
Production of pig iron and steel and rolled stock	142,300	4,730	147,030
Metal working industries	1,278,730	157,890	1,436,620
Production of machinery	531,040	49,090	580,130
Production of automobiles	89,110	13,690	102,800
Production of airplanes	14,670	1,480	16,150
Production of electrical equipment	125,680	24,730	150,410
Ceramic and glass industry	183,930	39,170	223,100
Building construction	874,420	11,720	886,140
Railroad operation	488,250	44,520	532,800

(2) Present Situation

These numbers probably increased somewhat during the past decade, but the withdrawal of the war prisoners from the labor market and the voluntary removal of many skilled workers to Germany has created a labor shortage in certain industries. Most of the prisoners of war are farmers or agricultural laborers, but the volunteer workers, numbering more than 150,000, include skilled metal and building workers as well as agricultural laborers. In consequence, there is a shortage of labor in the metal and building trades, and both coal-mining and agriculture are handicapped by insufficient numbers of qualified workers.

c. Rates of pay

(1) Wages in Paris

The hourly wages of certain representative occupations in Paris in a normal pre-war year and in the most recent year for which information is available were as follows:

	Oct. 1937	Oct. 1940
Machinists	\$0.42	\$0.27½
Electricians	0.39	--
Carpenters	0.39	0.23½
Masons	0.43	0.24
Painters	0.39	0.23½
Tailors	0.34	0.21
Printers	0.42½	0.27
General industrial skilled laborers	0.41	0.25
Workers in metal industries:		
Skilled	0.42½	0.28
Semi-skilled	0.34	0.24½
Unskilled	0.29½	0.19

(2) Wages in other cities

Average hourly wages in all French cities except Paris with more than 10,000 inhabitants were as follows:

	Oct. 1937	Oct. 1940
Machinists	$0.25	$0.16
Electricians	0.24	--
Carpenters	0.23½	0.15
Masons	0.18½	0.15
Painters	0.23	0.15
Tailors	0.22	0.14
Printers	0.24½	0.16
General industrial skilled laborers	0.23	0.14½
General unskilled labor	0.18	0.12
Women's occupations:		
Dressmaker	0.12½	--
Embroiderer	0.12	--
Milliner	0.12	--
General industrial skilled laborers	0.12½	--

(3) Wages in 1942

The following hourly wage rates were reported in force in France in February and March, 1942:

Region of St. Étienne (Dept. of the Loire)	
Coal miners	$0.15½ to 0.19½
Toulouse	
Iron and steel workers	
Skilled workers	0.22
Unskilled workers	0.11½ to 0.14
Shoe workers	
Men	0.16
Women	0.10½
Construction workers	
Skilled workers	0.17
Unskilled workers	0.11½
Departments of the Drôme and Ardèche	
Construction workers	
Skilled workers	0.16 to 0.18½
Unskilled workers	0.10½ to 0.11½

d. Working hours

The forty-hour week is still standard in France. In 1937 the average number of hours worked per man per week was 40.2; in June 1941 it was 38.4 in the Unoccupied Zone and 39.2 in the Occupied Zone. Less than half the workers actually worked a forty-hour week, however, in the summer of 1941. In the occupied zone 29 per cent of the workers put in more than forty hours a week and 28.5 per cent less than forty hours; in the unoccupied zone the corresponding figures were 20.6 per cent and 38.4 per cent.

e. Labor Movement

(1) Restrictions

In the autumn of 1940 the Vichy Government dissolved the two national labor organizations which aimed to represent all workers and trades: the General Confederation of Labor and the French Confederation of Christian Workers. Local trade unions, national federations for particular trades, and certain inter-trade organizations (Unions départementales) were allowed to continue, but their activities were restricted to professional matters concerning their own members.

(2) Labor Charter

In October, 1941, the Government published the Labor Charter, which is to regulate labor organizations and activities in the future; but it has not yet been put into effect. It provides for government sponsored and controlled unions, for regulation of wages and hours and settlement of labor disputes by joint committees of labor, management, and technicians under government supervision, and it forbids political activity by the unions and prohibits strikes and lock-outs. The great majority of the working class is hostile to the Charter and to the Government's labor policy, and many have protested openly against it.

22. Public Health

(This section is being prepared by the Office of the Surgeon General, United States Army)

23. Education

a. Education under the Third Republic

(1) Administration.

The government of the Republic maintained a strict centralized control over the entire educational system, from primary schools through the universities. The central administration was headed by the Minister of Public Instruction and the Superior Council of Public Instruction. Under them came the sixteen Academic Councils, which had charge of all grades of public education in the sixteen districts, known as Academies, into which France was divided. Each Academy was directed by a Rector, and each had several school inspectors to supervise the actual instruction in the schools. Every Department (90 in number) had an educational council, presided over by the Prefect; and it had large powers in the management and maintenance of primary schools and the authorization of private schools. Inspectors-general, reporting directly to the Minister of Public Instruction, kept him in immediate touch with the actual operations of the schools. All appointments to permanent teaching positions were ultimate- made by the central administration.

(2) Primary Education.

(a) Nursery Schools.

Nursery schools (écoles maternelles) offered pre-school training and care for children between the ages of two and six. In 1936 there were 3,381 public and 395 private schools of this type, with 301,000 children in attendance. Most of them were located in large cities and industrial centers. Their primary function was to care for the children of working mothers.

(b) Primary Schools.

The Republic required that all children of both sexes attend school between the ages of six and fourteen; and at least one primary school offering six-and eight-year courses of study was maintained by the state in every one of the nearly 40,000 communes. Clerical teachers were not permitted in the public schools, and Church or other private schools were allowed to exist only under state supervision. Students in them were required to take the same examinations as the students in the public schools in order to obtain official recognition of their training. In 1937-38, there were 5,400,000 students in 81,590 primary schools in France; and 4,500,000 of these were in 70,069 public schools.

(c) Advanced Primary Schools.

Every Department had at least one Ecole primaire supérieure to provide two or three years of supplementary academic training or vocational training on the primary level for students who did not enter the lycées or colleges. In 1936 there were 550 such schools with 100,000 students.

(3) Secondary Education.

(a) Lycées and Colleges.

Secondary education for students who had completed six years in the primary schools was provided by lycées maintained by the state, colleges supervised and partially supported by the state, and private institutions. The complete course of study covered six years. Tuition in the public schools was gradually being made free to all properly qualified Frenchmen of both sexes, and at the outbreak of war in 1939 the first three or four years were free. In 1937 there were in France 507 lycées and colleges with 250,000 students.

(b) Vocational Schools.

Some 200 technical and commercial schools maintained by the State offered practical training beyond that provided by the advanced primary schools.

(4) Normal Schools.

Each Department maintained, either alone or with another Department, two normal schools, one for men and one for women, to train teachers for the public schools. In 1937-38 there were 172 such schools with 10,500 students.

The central government operated two higher normal schools to train professors for the departmental schools.

The Ecole normale supérieure in Paris prepared teachers for the public secondary schools.

(5) Higher Education.

Higher education was not nominally restricted to state institutions, but the state faculties had the exclusive right to grant degrees. There were sixteen state-supported universities with 70,000 students in 1937 in Metropolitan France; and free faculties existed in six cities. The state also maintained several higher professional schools in a variety of fields.

(6) Curricula and Standards.

The curricula of both primary and secondary state schools were organized throughout the school system on a uniform basis. Instruction was essentially academic and in the secondary schools aimed primarily at training of the intellect. The prescribed course was heavily weighted in its emphasis on French history, culture, and geograph and religious instruction was forbidden.

b. Education under the Vichy Government

Since the Armistice of 1940, the French Government at Vichy has made several significant changes in the educational system; but it has not altered the basic organization of the system.

(1) Primary Education.

(a) State Subsidies.

Church primary schools are now eligible for grants of public funds to carry on their work.

(b) Advanced Primary Schools.

The advanced primary schools have been transformed into colleges or parts of colleges.

(2) Secondary Education.

(a) Tuition fees.

Tuition fees have been reintroduced in the lycées and colleges. Scholarships and additional financial aid are, however, available to able students of either sex who qualify for entranc but the state seeks to discourage large numbers from taking advanced intellectual training.

(b) Differentiation between lycées and colleges.

The lycées now offer a classical education only. The colleges offer only a "modern" curriculum, which includes more modern languages and sciences, and technical and commerical training. All the vocational schools have been established as colleges or parts of colleges.

(3) Normal Schools.

The departmental normal schools for the training of primary school teachers have been abolished on the ground that they produced a separate caste of teachers out of touch with the rest of the population. These teachers are now trained in the regular lycées and colleges and in a special supplementary one-year course in pedagogy.

(4) Curricula and Standards.

According to the directives of the Chief of State and the Minister of Public Instruction, French education now emphasizes the development of character more than the development of intellect. It is their intention that the primary schools teach courage, devotion to country, discipline, and respect for manual labor. One and a half hours each week of religious instruction at public expense have been made part of the primary curricula, and religious orders have been permitted to resume teaching. In all levels of education, more emphasis has been placed on physical training.

(5) Labor Service.

All French men who are physically fit must at the age of twenty years do eight months of labor service for the state in labor camps.

c. Literacy and degree of education

In 1931, 31,189,000 persons over the age of nine years (15,013,000 men and 16,176,000 women), among a total of 34,108,000 persons in that age group, or 91.5 per cent, were literate. Only 1,731,000 or 5.1 per cent, were illiterate; and the remainder was unspecified.

Among the 248,670 conscripts for the Army in 1934, 3.4 per cent could neither read nor write; 3.5 per cent could read but not write; and 43 per cent could read and write but had no further educational accomplishments. 4.5 per cent had obtained bachelor's degrees from lycées or colleges, and another 3 per cent had completed primary school

24. Religion

a. General Situation

France is traditionally a Catholic country, and the majority of French citizens have for centuries been baptized members of the Christian Church. Because of the fact that a close legal relationship existed for a long time between the Church of Rome and the French State, it had almost become customary up until the eighteenth century in France to think of the terms French and Christian as synonymous. This was followed by a development of agnosticism and skepticism which has continued until the present day.

b. Roman Catholic Church

Although the Catholic Church was the State Church in France until 1906, French citizens have enjoyed complete religious freedom since the French Revolution with a few moderate lapses during the 19th century, and in the early 20th. Though in recent years there has been a growing movement in France against the Church's influence in politics and national affairs, it is impossible not to recognize the importance which the Church has played in the progress and development of the French nation. Each city, town, village, or hamlet of France has its church and around the church over a period of centuries has developed cultural activity and civilizing influence. Thus today when one travels in France one sees constant reminders of the Catholic Church and its importance.

Before the outbreak of the war of 1914-1918 it can be said that the influence of the church was at a very low ebb. However, with the aid of the Catholic clergy in vigorously prosecuting the war, the Church earned the respect of a large part of the nation. Even though she had lost all state financial support and influence in the schools by the parliamentary acts of 1901, 1904, 1905, and 1906, she gained in prestige and moral influence.

With the defeat of France in the summer of 1940 and the establishment of the Pétain Government, congregations of the Catholic Church have been given permission to resume teaching. With the collapse of the French governmental system in face of the German invasion, the church, through the younger clergy in the occupied zone, appears to have formed a nucleus of resistance to the occupying forces and to the collaborationist schemes of the minority. Today there are Catholic youth movements of considerable importance and size, there are Catholic labor and trade union movements which are assuming proportions of considerable importance. In fact, since the collapse of 1940, there appears to be a revival of Catholicism, not only religious, but also political with strong leftist tendencies which rival those of the communists. This political activity is manifest, of course, in laymen's organizations, but it may be assumed that the clergy is influential.

c. Protestantism

Protestantism has always been of much less importance in France than Catholicism. There are today in France probably about 900,000 Protestants united, for political and cultural purposes, under the Protestant Federation of France. Before the war, this organization maintained central headquarters and held periodic congresses. Because of the fact that the President of the Protestant Federation is now known to be anti-collaborationist, it may be assumed that French protestantism is taking its part in the defense of French institutions and customs against the German menace.

d. Jews

Today French Jews are persecuted in much the same manner as German Jews, with the exception perhaps of the unoccupied zone, where the persecution is slightly less than in the occupied area. Whereas French Jews formerly held important positions in French government, finance, and cultural life, the influence of the Jews in present-day France has been reduced to a minimum. For religious purposes, the majority of French Jews are organized into "associations of worship," as decreed by law for all religious bodies, though not carried out in the case of the Catholic Church. These associations are united to form a national Central Consistory, under a Grand Rabbi, and maintain a seminary for the training of rabbis.

c. Freemasonry

Freemasonry was formed by men imbued with philosophies of learning and enlightenment of the eighteenth century. Of all the countries of Europe, France was most greatly influenced by this period and it was here that Freemasonry found a living political philosophy most readily adaptable to its creed. Although not a religion in the sense that Catholicism and the others are, it has the emotional forces and beliefs which make its influence felt in much the same way. It has been estimated that before the armistice of 1940 there were about 60,000 Freemasons in France and twenty-eight thousand in the French colonies. All the Masonic bodies carried on propaganda, held meetings and annual conventions. Formerly, both the Grand Lodge and the Grand Orient made a practive of adopting resolutions at their annual conventions in favor of the position taken in debatable questions by the parties whose political philosophy they upheld. It is claimed by the enemies of Freemasonry that many of the Republican leaders and directors of influential newspapers were Masons and worked for Masonic interests rather than national ones. It is this propaganda which the Vichy government has spread to justify its action in disbanding the order and closing up their property. It has, however, also been denounced by the communists as a bourgeois institution and inimical to their interests.

25. Public Order and Police

a. Respect for law and order.

Frenchmen are typically individualists and resent open expression of restrictive authority, but they are not a lawless or disorderly people. They are too rational and too great respectors of the individual and of property to fail to respect reasonable law protecting life and property. In 1933 there were brought before the courts of France only 1.2 cases of voluntary homicide, 0.6 cases of rape, and 87 cases of robbery and theft per 100,000 population. In 1934 in 762 cities of the United States the corresponding crime rates were 6.3, 5.5 and 311.3 per 100,000 population. The average population of all penal institutions in France was 19,224 in 1933, which was equivalent to 46 per 100,000 population; prison population in the United States in 1934 was 183,841, or 147 per 100,000 population.

b. Organization of the police under the Republic

Under the Third Republic the control of the police was shared by the Central government and the municipalities; but, except for the national police services and the police of a few large cities, the police were administered largely by municipal authorities.

(1) National Police.

(a) Surete Nationale.

The Surete was a corps of 2,000 non-uniformed police under the Ministry of the Interior. It was the "Brain" of the French police; and its members, operating in secret, ranged over all France to investigate **subversive** activities, search for dangerous criminals, or aid local police in maintaining order. It had several specialized branches, including the Police mobile, which was a judiciary police operating from fifteen strategically located centers to identify and apprehend dangerous criminals.

(b) Gendarmerie.

The Gendarmerie, a military force of 40,000 men, was distributed throughout France, having units stationed in every Department. It was charged with aiding local authorities, especially in rural communes, in maintaining public order and with policing the national highways. It was under the authority of the Ministry of War.

(c) Garde Mobile.

The Garde mobile was a force of 20,000 men distributed among the principal cities of France. They were armed with rifles and could be sent to any danger point where there was a threat of serious civil disorder. They were used especially at the scene of labor disorders.

(2) Police of strategic centers.

To safeguard the security of the country and the regime, the government of the Third Republic kept the police of Paris and certain other urban centers under its own direct control.

(a) Police of Paris.

(1) Regular police.

The police of Paris and its suburbs in the Department of the Seine were administered by a special official, the Prefect of Police, who was directly responsible to the Ministry of the Interior. He had complete control of police activities in Paris itself, but the mayors of the suburban communes retained some independent police powers for the maintenance of public order in their territories. The Prefect's organization, the Prefecture of Police, was composed of a force of 16,000 men and included a bureau of criminal identification which served as a central clearing house of finger-print records for all French police. The expenses of the prefecture were borne jointly by the national and municipal governments, but the latter had no voice in the administration.

(2) Supplementary Police.

The regular police of Paris could be supplemented in times of emergency by the Republican Guard, a militarized force of 3,000 men stationed in Paris and under the joint control of the Ministry of the Interior and Ministry of War; and by the fire department of the city, a unit of the regular army. The members of the latter organization were armed with rifles as well as with high-pressure streams of water.

(b) Police of other strategic centers.

The police of Lyon, Marseille, Toulon and and La Seyne, Nice, Strasbourg, Mulhouse, and Metz, and of sixty-four communes of the Department of Seine-et-Oise and nineteen communes of the Department of Seine-et-Marne near Paris were directed by the prefects of the respective departments with the assistance of the Sûreté Nationale. The local authorities had no voice in the administration of the police.

(3) Local Police.

Towns of 5,000 or more inhabitants were required by law to maintain a police service with atleast one commissioner of police. He was appointed by the prefect but operated under orders of the mayor. Subordinate police personnel might be provided at the discretion of the municipal councils. Cities with more than 40,000 inhabitants were required to have additional officers; and the plan of organization, salary scales, and minimum standards were imposed by national decree. Control remained, however, in the hands of the local mayors.

(4) Village and Rural Police.

In communes with fewer than 5,000 inhabitants the mayor was responsible for the enforcement of law. He might be assisted, at the discretion of the municipal council, by one or more gardes-champêtres, and almost all rural communes had at least one such officer.

c. Organization of the police under the Vichy Government.

(1) Civil Police.

The French Government in Vichy has completely reformed the basic organization of the police and centralized the control of it. In July 1941 all French police forces, except the militarized forces and the local police in communes with fewer than 10,000 inhabitants, were grouped into three categories, and all were made responsible to the Ministry of the Interior. The new basic groups are as follows:

(a) Judiciary police, which investigate and apprehend law violators and bring them before the courts.

(b) General information service, which carries on surveillance of suspected individuals or groups, supervises use of means of transport, and centralizes police information.

(c) Public security forces, which are composed of local and regional police forces and are charged with maintenance of public order.

Centralized control is maintained through a hierarchical organization, with the Ministry of the Interior and the Secretariat of State for Police at the top. Under them come the regional prefects, each assisted by one or two intendants of police, who administer the police in the seventeen regions into which France is divided for administrative purposes. The regions are divided into districts composed of one department or portion of a department; and in the districts the police are administered by the prefects, assisted by district commissioner of police, who have charge of police in the circonscriptions, administrative units made up of one or several communes. At present, all civil police are under the personal direction of the Chief of Government, who is also the Minister of the Interior.

(2) Gendarmerie.

The Gendarmerie has been removed from the control of the Ministry of War and placed under the personal direction of the Chief of Government.

(3) Police School.

In August, 1941, a national police school was opened at St. Cyr-au-Mont d'Or to train men for the higher posts in the police system. The advanced course, open only to men with law degrees, includes cultural and technical studies as well as practical training, and prepares men for posts as police commissioners. There is a shorter practical course for the training of police inspectors.

d. German Police in France

In addition to the German military and secret police operating in Occupied France, there is now attached to the Parisian police a special Gestapo section charged with suppression of anti-German activities in the occupied zone. It is headed by an officer of the Elite Guard who holds the title of High Commissioner of Police.

26. Press, Propaganda and Censorship

a. General Situation

The French press, since the armistice of 1940, is composed of two groups of newspapers--those published in the occupied zone, particularly Paris, and those of the unoccupied zone particularly Lyon, Clermont-Ferrand, and Vichy. The great technical difference between the papers of the two zones is this: the papers of the occupied zone are practically, for all political purposes, German papers in the French language. They are filled with propaganda and are controlled and directed like the newspapers of a nation at war. The press of the unoccupied zone, on the other hand, exhibits certain characteristics of the press of a non-belligerent nation. It attempts to demonstrate an attitude of neutrality, and publishes the communiques of all the warring powers.

b. Influence

It can probably be said that the press of the occupied zone exerts little or no influence on public opinion in that area. The French are well aware of the control exacted by the Germans, and consequently regard these papers with considerable skepticism. There are, in Paris, a few French journalists collaborating with the Germans, who undoubtedly have gained a certain prestige and thus exert an influence among those open to persuasion for a collaborationist policy.

In the unoccupied zone, although very much censored, the press undoubtedly exerts an important influence over the people. Here there is not the suspicion and hatred aroused by foreign forces of occupation, and even though the government itself may be under suspicion, the fact that the press appears to be run by Frenchmen is an important factor. With the return of Laval to power, however, the press becomes less objective and more an instrument of German policy.

c. Clandestine Press

There is a third group of newspapers in France known as the independent press. These are papers published by secret revolutionary groups who risk their lives in order to keep the national spirit and unity alive until the day of liberation. It is difficult to estimate the influence which these papers exert. There are reported to be about thirteen altogether, and one is quoted as having a circulation of 100,000. (See Appendix on press for full list of French publications).

d. Types of Effective Propaganda (for Radio and other Means)

To influence the French, factual information appears to be the most effective type of propaganda. The French, who are critical and skeptical by nature, are well prepared to question the information which they receive either by press or radio. No matter how much the French may hate the Germans, they have undoubtedly learned to respect the power of their arms, and they know full well that in order to defeat Germany it will take an equal and finally superior power to overthrow her. Information which proves that the United States is in a position to do this is effective propaganda.

Another form of effective propaganda is shipment of food supplies and clothing. The French have suffered greatly since the collapse, both from malnutrition and lack of proper clothing. Their prisoners-of-war in German camps have suffered from the same conditions, and the future for the children of France is seriously menaced.

The best propaganda that we can make is undoubtedly to prove to the French, through any means at our disposal, that the United States is determined to defeat Germany. It is important to state, in general terms, how this can be accomplished. They should also be told that, following upon a German defeat, we shall bring them nourishment and clothing in abundance.

Section IV

POLITICAL

27. General

The outstanding characteristic of the contemporary political scene in France is that the whole political set-up is dependent upon the military and political developments abroad.

With the conclusion of the armistice convention between France and Germany on the one hand, and between France and Italy on the other, together with the German occupation of 55% of French metropolitan territory, the Vichy Government became subject, almost without question, to the decisions of the German Government as formulated by the Armistice Commission at Wiesbaden and the German Ambassador and officers in Paris.

Today the German Government has the power, and very frequently uses it, to govern all French political, commercial, financial, religious and cultural activities. Opposed to this power, there is the hatred of the French people for their conquerors, and their frequent use of sabotage and other methods to upset the invaders' plans.

In spite of the apparently overwhelming German power, there are two important assets remaining to France: the French fleet, and the French Empire, both of which are under the final jurisdiction of the Vichy Chief of State, Marshal Petain, and practically remain the latter's sole bargaining power. Attempting to maintain a position of neutrality until he can foresee on what side the fruits of victory are to be reaped, Petain tries to avoid excessive demands from both groups of belligerents, although personal ambitions and political ideologies are becoming more and more influential.

Having accepted the great responsibility for making an armistice with Germany in the summer of 1940, Petain and his colleagues, who believe France's defeat due to the weakness of parliamentary government and democracy, set about to give France the kind of government which they believed she needed. Autocratic police government has replaced government based on constitutional law and run by parliamentary methods. Political parties have been abolished and the principles of freedom of speech, of thought, of religion, and of the press have been disavowed and discredited.

With the return to power of Pierre Laval in April of 1942, the new Chief of Government has established a kind of personal hierarchy in the governmental and police administrations; and he has committed the French nation to a political program which neither Darlan nor Petain dared openly to profess. He has publicly announced his belief in a German victory, and at the same time he is trying to secure his position within France and the empire in order to put himself and his country at the disposal of a political system which has no relation whatsoever to the last one hundred and fifty years of French political thought and development.

28. Government

a. Introductory

(1) Counter-Revolution of 1940.

The present government of France, the Vichy system, dates from July of 1940. Its principal characteristic is dependence on the will of Germany.

From a French point of view, the Vichy regime is reactionary and fascist. It is inspired in several aspects by Italian and Spanish experience, but its essential flavor is an outmoded French one. Pétain has insisted that the source of the present system is "national revolution". In reality, there has been primarily a counter-revolution.

The basic tradition of France remains that of the great Revolution. It is a parliamentary, republican, liberal democratic tradition.

(2) Tradition of the French Revolution.

(a) Parliamentary Government.

The French Third Republic, 1870-1940, had by far the longest life of any of the several regimes that have prevailed in France since the overthrow of the Ancien Regime. The government of the Third Republic was the parliamentary system. These two facts are fundamentally related as effect and cause.

(b) Republicanism.

In the tradition of the continent of Europe, parliamentary government and political democracy are, by friend and foe alike, identified, the two concepts being in general interchangeable. France played the principal role in establishing this tradition. At the same time, whereas in the typical cases parliamentary government has served to reconcile monarchy and democracy, the French tradition is one of a definitive break with monarchy. Significantly, the Vichy radio has insisted that the Government of the United States insults Vichy when it refers at present to France as a republic.

(c) Democracy.

The French people are basically democratic in belief and sentiment. Hence, except in unusual conditions, the majority of the people will not be satisfied with any political system that does not rest on democratic principles. This means that the French will inevitably tend to "turn or return" to the Parliamentary System.

(d) Liberty.

The tradition of parliamentary government is one of freedom. Hence, the shortcomings which the system inevitably displayed in practice were, under the Third Republic, widely discussed. They were in fact subject of bitter controversy. A materially powerful minority which was antidemocratic--and therefore by definition antiparliamentary--employed criticism of the shortcomings of parliamentary government as an argument in favor of abandoning political democracy. This minority is at the present moment, through German support, in power. The mass of the people, however, were not, and are not, willing to abandon democratic government. Insofar as this majority was put on the defensive, it was disinclined to accept criticism of the shortcomings of parliamentary government even as an argument in favor of reform. The issue involved is now only dormant; it will reappear when freedom is reestablished.

(3) Collapse of the Third Republic.

In 1940, France was undoubtedly weakened by certain social, economic, and political maladjustments. However, it is impossible to prove and exceedingly difficult to believe that the Third Republic would have come to an end through deliberate choice of the nation. The shortcomings of the regime did not cause its downfall. The real explanation is the disastrous defeat of France suffered at the hands of German armies.

b. National Government.

(1) Regime.

The Vichy system, in supplanting the Third Republic, can and does lay some claim to having followed existing juristically defined procedure. According to the Constitution of the Third Republic, a National Assembly, composed of the members of the two Chambers of Parliament, possessed power to amend the Constitution. In the abnormal conditions that prevailed in July of 1940, subsequent to the armistices of June, a National Assembly was convened at Vichy, though strict legal procedure, a procedure which had been followed in all previous cases, required that the meeting should take place at Versailles. This Assembly vested dictatorial power in Marshal Pétain. More specifically, the National Assembly granted "all power to the Government of the Republic, under the authority and the signature of Marshal Pétain, with a view to promulgation, through one or more acts, of a new constitution for the French State".

Certain enactments and decrees of

Marshal Pétain form the legal basis of the prevailing government of France. Marshal Pétain has assumed the validity of the National Assembly and has construed the grant by it to him as authorization for what he has done. This is the substance of his claim that the Vichy regime supplanted the Third Republic through legally correct procedure. Some opponents of the Vichy regime, notably the followers of General de Gaulle, deny that the foundations of the Vichy government are valid. Most of such controversy, which frequently tends to confuse legal and moral arguments, is arid and fruitless.

(2) Political Structure.

(a) Executive.

(1) The Head of the State.

Marshal Pétain, by virtue of an enactment of his own dated July 11, 1940, possesses the legal position of Head of the French State. The position of headship of the State was, under the Third Republic, occupied by the President of the Republic. The position was regularly contrasted with that of headship of the Government, which was held by the Prime Minister, technically known as President of the Council of Ministers. From the beginning until recently, Marshal Pétain combined in his own person both headship of the State and headship of the Government. Under this arrangement, first Laval and then Darlan were known as Vice-President of the Council of Ministers. On April 18, 1942, Marshal Pétain issued an amending enactment making Laval head of the Government, that is to say, President of the Council of Ministers.

The Constitution of the

Third Republic vested in the President of the Republic such powers as are usually associated with the executive branch of government. In July of 1940, Marshal Pétain issued an enactment which repealed the body of constitutional provisions that defined the position of the President of the Republic. The same enactment vested in himself the usual executive powers. These included promulgation and execution of laws, appointment of civil and military officers, command of the armed forces, pardon and amnesty, reception of foreign representatives, negotiation and ratification of treaties, and declaration of martial law. A provision of some interest but of uncertain importance stipulates that a declaration of war shall require legislative assent.

Under the Parliamentary System, the Head of the State, the President of the Republic, was said by the French to possess but not to exercise political power. Political decisions, and hence the exercise of political power, were the prerogative of ministers responsible to Parliament. The position of Head of the State was thus in general a symbolic and formal one. Consequently, his virtual irresponsibility was no cause for concern. The Head of the State was frequently referred to as a "figurehead". The present position of Marshal Pétain tends to assume a similar character.

Pétain appears in general still to be held in high esteem by the bulk of his fellow countrymen. The French people, especially those of the Unoccupied Zone, apparently feel that the hero of Verdun is all that they have and that they must hold to him as a drowning man clutches at any support.

Pétain has commonly been regarded as a monarchist. He was almost certainly not sorry to see the end of the Third Republic in France. For years before the war, he was known as an advocate of an authoritarian regime. However, Pétain's record and reputation as a reactionary tend largely to be overlooked. He is asserted to be a sincere and honorable man.

Pétain is a very old man. In recent months, he has remained unaware of much that was being decided and done by his subordinates in the government. Only in a few matters has he insisted on arriving at his own determinations. He has certainly been aware of the nature of public sentiment and has been influenced by it within the limits of his being substantially at the mercy of the Germans. In a well known declaration, he referred to himself as a man with a rope about his neck. It is certain that the Germans, not popular sentiment, caused Marshal Pétain in April of 1942 to accept Laval as Head of the Government.

(2) The Ministry and the Head of the Government.

Pétain, as Head of the State, is irresponsible. He has asserted that he is "responsible to history". The ministers are in theory responsible to him. Under the Parliamentary System, the ministers, though likewise responsible theoretically to the Head of the State, were in actuality responsible to Parliament. Under the present Vichy regime, the ministers, being responsible only to Pétain, are in reality not responsible at all, unless it be to the

Germans.

The members of the most recent French ministry, that of April 18, 1942, were chosen by Laval. A special decree declared that the Chief of Government should submit his list to the Chief of State, to whom an accounting for undertakings and acts would be due.

In the present ministry there are five persons of full ministerial rank in addition to President of the Council Laval, who heads three ministerial departments. The complete list is as follows:

Ministry	Incumbent
Foreign Affairs	Pierre Laval
Interior	Pierre Laval
Information	Pierre Laval
Justice	Joseph-Barthélemy
Finance	Pierre Cathala
Agriculture and Supply	Jacques Leroy-Ladurie
National Education	Abel Bonnard
State (without portfolio)	Lucien Romier

The list of Secretaries of State is as follows:

(Attached to)	Incumbent
Head of Government	Fernand de Brinon
Head of Government	Charles Platon
Head of Government	Jaques Benoist-Méchin
Information	Paul Marion
War	Eugène Bridoux
Navy	Paul Auphan
Air	Jean Jannekeyn

(Attached to)	Incumbent
Agriculture and Supply	Max Bonnafous
Labor	Hubert Lagardelle
Communications	Robert Gibrat
Family and Health	Raymond Grasset
Colonies	Jules Brévié
Industrial Production	Jean Bichelonne

The officially designated successor of Marshal Pétain is at present Admiral Darlan. Though this position had been held by Laval from July to December, 1940, it is now retained by Darlan in spite of Laval's return to power. Admiral Darlan has ceased to be a member of the ministry. He is commander of the land, sea, and air forces. He possesses the right to attend cabinet meetings when a service under his direction is being considered.

In the event that France should be freed from German occupation, Laval and his subordinates would certainly disappear from power. Pétain might, conceivably though not probably, be retained through a combination of survival of some popularity with popular deference to a feeling for continuity. The Free French, in their somewhat finely spun arguments, insist that Lebrun, the last President of the Republic, is the rightful Head of the State. In any event, the question of the formal head of the State will scarcely be a matter of great moment. Popular sentiment, probably expressing itself at first through the old Parliament, will determine the real Head of Government. Persons who have remained in France will doubtless have, for psychological reasons, advantages over leaders of the Free French.

It would not be surprising if someone like Herriot, Blum, or Mandel should become premier, until or unless leaders at present unknown come to the top.

(3) Administration.

According to the terms of the Franco-German Armistice, a part of French territory was to be occupied by German troops "with a view to safeguarding the interests of the German Reich". The terms provide further as follows: "In the occupied regions of France, the Reich shall exercise all the rights of an occupying Power. The French Government shall undertake to facilitate in every way all regulations concerned with the exercise of these rights and their operation with the help of the French administration. The French Government shall at once request all French authorities and administrative services in the occupied territory to comply with regulations of the German military authorities, and to collaborate with them in a correct and proper manner".

Application of the terms of the Armistice were anticipated to be of short duration. Unexpected continuation of the war has had far-reaching effects. Thus, the Armistice terms provide: "The French Government shall be free to choose its seat in the non-occupied territory, or even, if it so desires, to transfer it to Paris. In the latter event, the German Government undertakes to grant all the necessary facilities to the Government and its central administrative services, so that it may be enabled to administer both the occupied and non-occupied territories from Paris". All efforts of the French Government to return to Paris have met with refusal. Vichy is actually represented in Paris by an ambassador. Many of the executive departments, however, have offices both in Vichy and Paris.

Vichy has proclaimed as one of its principal aims the simplification of administration. It has in fact made it more complex and less efficient. In addition to the division of a number of individual departments between Vichy and Paris, departments have been multiplied. In general, the present body of functionaries in France consists of former civil servants "purged" of the most notorious supporters of the Left. Considerable numbers of army and naval personnel have apparently been added. Many of the new officials are incompetent.

In the event of freedom from German occupation, a far-reaching purge of the administrative personnel would undoubtedly take place. Its direction would in general be the opposite of that of the purge which has occurred under the Vichy regime. The occasion for a new purge will present a situation which will be difficult for all concerned. A satisfactory solution will be highly important.

(b) Legislative.

(1) Parliament of the Third Republic.

An enactment of Marshal Pétain on July 11, 1940, adjourned "until further order" the two houses of Parliament, the Chamber of Deputies and the Senate. The members of these Chambers have retained, however, a certain amount of prestige and authority in their constituencies. In the early days of collaboration, a considerable body of members at Vichy exercised a restraining influence on the government. For this reason, anenactment of August

29, 1941, transferred, ostensibly because of housing congestion, the secretariats of the Chambers from Vichy to Châtelguyon. Members are legally prohibited from holding even unofficial meetings in the Department of the Allier, the department in which Vichy is located.

In the event of friendly occupation of France, Parliament will probably be resuscitated at least long enough to make arrangements for a free expression of the national will.

(2) Vichy and Legislation.

Another enactment of Marshal Pétain on July 11, 1940, stipulated that he should "exercise legislative power in ministerial council". This power was to exist until new Assemblies should be formed. Such formation seems to have been indefinitely postponed.

Marshal Pétain, then, possesses full legislative power, to be exercised with the advice of the ministry. The extent to which he in reality exercises the power will depend, as in the case of executive power, on his relations with Laval and with the Germans.

(3) Advisory Councils.

(a) A Consultative National Council was created by law on January 22, 1941. This body was theoretically to have taken the place of Parliament during the adjournment of the Chambers. In reality, it has been only a facade. The membership of the Council, the size of which was not fixed, was, in addition to an appointed part, to have included persons chosen from and by various bodies. In practice only appointive members have come into existence.

Of these, 188 were listed in one block; but some resigned or refused to serve, and a few more were subsequently added. Some of the principal elements of the membership are as follows: former Deputies c. 22%; former Senators c. 14%; industrialists c. 16%; agriculturists c. 15%; scientists c. 8%; traders approximately the same; and a few others such as war veterans, ecclesiastics, journalists, and the like.

(b) The Council of State has been retained. Laws of December 18, 1940, and August 27, 1941, have given to this distinguished body a position more like that which it had under the First Empire than that which it enjoyed under the Third Republic. Its composition has been substantially altered by a serious purge. Its members are required to take an oath of fidelity to the Head of the State. Its legislative duties, as distinguished from its administrative and judicial functions, consist of preparing and drafting texts, of giving advice on texts prepared by the ministry, and of drawing attention on its own initiative to desirable reforms in prevailing legislation and regulations. In general, the actual part played by the Council of State has been greatly superior to that of the Consultative National Council.

(4) Legislation in Occupied France.

Legal stipulations emanating from Vichy are, unless they are specifically confined to the Unoccupied Zone, in principle applicable in the Occupied Zone. However, the Germans have the right of veto over such application. They likewise make their own regulations, these taking precedence over French law.

c. Local Government

(1) Vichy versus the Republican System.

(a) Basic Changes.

The Vichy regime has substantially altered the normal French system of local administration. It has greatly increased its already considerable degree of centralization; and it has deprived it of its popular basis. There has likewise been a far-reaching purge of local administrative personnel. In the event of the disappearance of German control, what has been said of the central administration will in general be true of local administration. An anti-Vichy purge can be expected. Moreover, the popular basis of local government will almost certainly be restored.

(b) Departments and Communes.

The Departments (90 in number before the war) and the Communes (c. 40,000) remain as the principal local areas. The popularly elected Department Councils have been suspended, being supplanted, in accordance with the normal fascist pattern, by appointive bodies that are merely advisory. The same is true of Commune Councils in all communes of more than 2,000 inhabitants (c. 2,700 in number). In the departments, the position of the centrally appointed Prefect has been strengthened. In the communes, the Mayors have become appointive in the more populous areas, and in all cases more dependent on the central government. This increased and fortified control (tutelle) on the part of the central government means in practice enhanced importance of the Ministry of the Interior, to which they are responsible. It is no accident that this Ministry is one which Laval reserved for himself.

(c) Regional Prefects.

The Vichy regime proclaimed early its intention to restore the old provinces. So far, however, little along this line has been accomplished. Vichy has confined itself to conferring on certain Prefects authority reaching into other departments than their own, the position of Regional Prefects thus being established. The powers of the Regional Prefects are confined to police, to economic questions, and to the discipline of officials. Such Prefects in the Unoccupied Zone are located at Limoges, Clermont-Ferrand, Lyon, Toulouse, Montpellier, and Marseille. In the Occupied Zone, the cities involved are Nancy, Laon, Châlons-sur-Marne, Rouen, Rennes, Angers, Orléans, Dijon, Poitiers, Bordeaux, and Lille.

(2) Occupied France.

The Vichy Government in principle retains power to appoint Prefects, Mayors, and Commune Councillors in the Occupied Zone. However, the decisions must be acceptable to the Germans. The Germans have placed in each prefecture a Feldkommandatur and in each sub-prefecture (in the normally unimportant arrondissements) a Kreiskommandatur. French civil courts and German military courts coexist. The Gestapo supplements the French police.

The Germans have established various subdivisions and distinctions in the Occupied Zone. These are often purposely vague and confusing. In general, the larger part of the Occupied Zone has been made subject to the authority of a Commandant of German Military Administration in France. The Commandant has under him two important departments, one of which is concerned with administration and the second with economic matters. Five regions are employed, their capitals being Paris, St.-Germain, Angers, Bordeaux, and Dijon.

29. Political Parties

a. Introductory

In normal times in France, a political party (parti) was considered to be, strictly speaking, a political organization existing in the country at large. Where a number of members of one or the other of the Chambers of Parliament were bound together more or less closely by certain political affiliations and for certain political purposes, they were regularly called a groupe. Hence, when a political association in Parliament corresponded to a political organization in the country, it was a group of a party. However, such correspondence, though of particular importance where it existed, was the exception rather than the rule. One or two parties existed to which no groups corresponded; and there were various groups to which there were no corresponding parties.

In respect of the most important aspect of French political terminology, political parties in the country at large had to presuppose the existence of political groups in the Chambers. In France, and in Continental Europe in general, political groups in a Chamber sat in a semi-circle in front of the presiding officer, ranging from extreme radical on the president's left to reactionary on his right. This, in turn, was the basis for the far reaching classification of political parties in the country, together with their political tendencies, as Left or Right.

Under the Third Republic, multiplicity of political parties and groups was regarded by many people as the principal characteristics of French practical politics. However, the apparent complexity was in some degree offset by the tendency for basic issues to align parties and groups into camps of Right and Left.

b. Right versus Left

(1) The French Revolution.

(a) Acceptance or Rejection.

Distinct and acute differences between Right and Left were easy to observe. Explanation of such an exceedingly complex situation was a different matter. A familiar suggestion in France consisted of the assertion that the simplest distinction between Right and Left was to be found in the matter of rejection or acceptance of the French Revolution. This view stresses older traditional political issues as distinguished from modern economic and social questions.

The principal issues associated with the French Revolution were those of the regime, the church, and the army. Attitudes towards these issues naturally tended to change with the passing of time. Hence, in connection with differences between Right and Left, the issues had primarily the influence of historical associations and of tendency.

(b) Historical Political Issues.

(1) Regime.

Traditionally, the Right was monarchial, the Left republican. Before the war of 1939, France had been republican for nearly seventy years. Hence, the regime seemed to be so well established as not to be a vital issue. However, since the republican system was identified by the French with political democracy, the Right was opposed to political democracy, to the Republic, and to the French Revolution. Inasmuch as the Vichy regime is in the tradition of the Right, its spokesmen, including Marshal Pétain, dwell at length on the weaknesses of democracy, on the shortcomings of the Third Republic, and on the virtues of the Ancien Regime. Pétain is said to be influenced in political matters primarily by the monarchist leader, Charles Maurras.

(2) The Church.

The present Minister of Justice, Joseph-Barthélemy, several years ago wrote concerning the difference between Right and Left: "Perhaps the surest criterion would still be opinion on the subject of the churches in the State, of religious liberties, of relations with the Vatican, and so on. Religious questions have been tearing our country for centuries". Traditionally, the Right regularly supported the Church, the Left was anti-clerical. In practice, the Church in France had a record which was in general reactionary politically, economically, and socially. This was a fact, though there was in theory no reason why uncompromising supporters of the Church might not have been men of bold social and economic views. Certain people in France in recent years hoped for the development of such a combination. At present, the view is expressed that one hope for France's future is such a development, especially among Catholic Youth.

(3) The Army.

Historically, the instinctive opposition of the Left to the Army was based on the feeling that the Army had been employed as a bulwark in the protection and furtherance of the interests of the privileged few. However, the Left was by no means always anti-militarist. At times, the Left was confident that it could have the Army serve the ends of its own internal and foreign policy. On the other hand, in the years between the two wars, the Left in France was somewhat naively pacifist, an attitude which, however good its intentions, played some part in France's disaster.

(2) The Industrial Revolution.

Though the great French Revolution and traditional issues associated with it served as revealing formal tests of the opposition between Right and Left, certain important aspects of the Industrial Revolution often cut considerably more deeply. In the simplest terms, the issue was that between capitalism and socialism.

c. Political Organizations before the Fall of France

(1) Parties.

(a) The Left.

(1) Communists.

The French Communist Party was a member of the Third, or Moscow, International. It was known as the French Section of the Communist International (S.F.I.C.). The Party was abolished by decree in October of 1939 as an immediate result of the pact between Germany and the Soviet Union.

The party of Communists in France dated as an organization from the year 1920. It resulted from a split in the Socialist Party.

The Communist Party, as a member of the Moscow International, accepted the body of doctrine that owes its formulation primarily to Marx and Lenin. It stood basically for the overthrow of the capitalist system by revolutionary means. It advocated class warfare, the dictatorship of the proletariat, and the socialization of the means of production, distribution, and exchange. The French party had its own particular program of action, approved by the International. However, in recent years, it had tended to relegate its program to the background, in order to join in united opposition to fascism. Though the French Communist Party had earlier been encouraged by Moscow to join with parties of the Left against the Right, a real working agreement, that of the Popular Front, was not effected until the period of preparation for the 1936 elections.

As a result of the elections of 1936, the Communist Group in the Chamber of Deputies (618 members) was composed of seventy-two members. This Group was nearly three times as great as it had been in any previous Chamber. There were likewise two Communists in the Senate (314 members).

The strength of the more orthodox Communists in France was to be found among industrial workers, particularly in the suburbs of Paris. Also, many school teachers were Communists. In general, the fact that discontented classes, including the peasants in several sections, were accustomed to cast protest votes and that in some regions there existed a kind of affectation or fashion of voting Communist as a sign of being "advanced", brought about that the Communist vote was considerably superior to party membership.

In the days following the beginning of war between France and Germany in September of 1939, the Communist members of Parliament undertook certain activities, such for example as petitioning for the cessation of war, that were in contravention of existing special law. As long as Parliament was in session, these members were covered by parliamentary immunity; but, after adjournment, many of them were arrested in connection with Government moves to effect abolition of the Party. Thorez, general secretary and principal leader of the Communists, escaped. Vichy has been taking further severe measures against Communists. However, as Admiral Leahy has reported, the Communist Party merely refuses to be abolished. He adds that the Party has considerable, but not precisely known, strength, and that Vichy is exceedingly afraid of it. The underground resistance of the Communists has been especially vigorous since the entrance of Russia into the war. Their organization, with its cellular basis, is peculiarly suitable for such activity.

(2) Socialists.

The Socialist Party in France, known as the Unified Socialist Party, was an adherent of the Second, or London, International. It was thus the French Section of the Workers' International (S.F.I.O.). Its doctrine was Marxist, the Party leaders insisting that the Socialists, not the Communists, were the true disciples of Marx. The Party stood for the supplanting of capitalism by a collectivist system. It proclaimed itself a party not of reform but of class struggle and revolution. However, it deprecated terror and dictatorship, and it accused the Communists of confusing social revolution with political revolution. Hence, its socialism in reality appeared of an essentially evolutionary variety. Among various other characteristics which the Socialist Party claimed as differentiating it from the Communists were its refusal to be subordinated to Moscow and its hostility to subordination of the organized labor movement, which it thought ought to be autonomous, to a political party.

As a result of the elections of 1936, the Socialist representation in the Chamber of Deputies was for the first time the largest in the Chamber. Thereupon, the leader of the Unified Socialists, Léon Blum, became Prime Minister. He formed a ministry of the Left, except for the Communists, who, though refusing office, undertook to lend support. There followed a remarkable series of quick reforms, - labor, agricultural, scholastic, administrative, monetary, press, banking, industrial, and political. The results have ever since been the subject of bitter controversy.

Blum was not from a laborer family. The same was true of many of the other leaders of the Unified Socialists. Some of them were even men of considerable wealth. No small number of persons in the professions and in university life were Socialists. As in the case of the Communists, the Socialist Party could command the services, especially for propaganda purposes, of many school teachers and other government employees. However, the body of the Party membership was composed of industrial and to some extent agricultural workers. Such members were to be found in the regions and in the industries - for example, mining and metallurgy - where Communism had not become established. Likewise, at times of election, the Socialist Party received the support of a part of such persons as became, through discontent and dissatisfaction, "advanced". The Group of the Unified Socialists in the Chamber of Deputies consisted, at the outbreak of war, of 155 members. The Group in the Senate was composed of 15.

(3) Radicals.

Radicals in France corresponded to the Liberals in England. However, the French Radicals, though attacked from both sides like liberals everywhere, escaped the fate of English Liberals, almost ground to pieces between the Labor Party and the Conservatives. The term radical in France is an historical survival. As applied to the party of that name, it should not be given the meaning and associations attached to the usual American uses of the expression.

The French Radical Party was officially founded in 1901, but its antecedents went back much further. It claimed direct descent from the French Revolution. In this tradition, it was hostile to the Church, the Army, and the Bankers. In the same tradition, it had been the typical republican party. Its official name was

"The Republican Party of Radicals and Socialist Radicals". The name indicated a dual composition that had persisted for many years. One wing was in the old political liberal tradition, which laid stress on individualism. The other wing was in the more modern economic and social liberal tradition, advocating employment of democratic processes to bring an increasingly great degree of social justice to the masses.

The best known leaders of the Radical Party were Daladier and Herriot, both former school-masters. The Party did not, with a few notable exceptions, recruit many of its members from the upper bourgeoisie. More of its members came from the middle bourgeoisie, and the mass of the membership from the "petite bougeoisie". It was said that the Party was "as by instinct" in favor of what is "small" and against what is "big".

The Group of the Radical Party had 116 members in the Chamber of Deputies that was elected in 1936. Traditionally, its membership had been the largest of all the groups in the Chamber. Thus, in the previous Chamber the membership was 160. The Radical Group in the Senate, officially known as the Democratic Left, consisted of 151 members, that is, of almost a majority of the Senate.

(4) Republican Socialists.

A Party of Socialist and Republican Union, consisting for the most part of Socialists who did not adhere to the Unified Socialists, occupied a position between the Radicals and the S.F.I.O. It formed a minor element of the Popular Front, its Group in the last Chamber consisting of 29 members.

(b) The Right.

(1) National Republicans.

The most typical party of the Right in France was the Republican Federation. It was founded in 1903 through the fusion - whence the name "Federation" - of three organizations of a conservative or reactionary character. Many of its members were Monarchists or sons of former Monarchists - whence, in common with many paradoxes of party labels, the epithet "Republican". It had a few years before the outbreak of the war of 1939 assumed the name "National Republican Party".

The Party consistently maintained a Right - and hence anti-Left - position. It championed the cause of religion, and in its program inveighed against the Left as being anti-religious. It favored, in common with the Catholic Church, woman suffrage. The Party conceived that this extension of the suffrage, together with electoral reform, would strengthen its position. The Party found distasteful the existing income tax and taxes on business. It disapproved any extension of the tax system that would impose greater obligation on the moneyed classes. It was against all socialization and regulation in industry, and was otherwise vigorously laissez-faire in economic doctrine. In foreign policy, its most worthy members were nationalistic. They viewed the policy of the Left as one of weakness and vacillation attendant on flirtation with pacifism and collective security.

The leader of the National Republican Party was M. Louis Marin. Following the advent of the Vichy regime, he showed himself to be a vigorous and courageous opponent of collaboration with Germany.

In the Chamber of Deputies of 1936, the members of the Republican Federation Group numbered 62. In the Senate, the Group of Republican Union, which corresponded most nearly to the Republican Federation, was composed of 65 members.

(2) The Democratic Alliance.

The Democratic Alliance was not greatly different from the National Republican Party, though it was slightly less to the Right. Founded in 1901, it had been several times reorganized, the last time in 1936. It was not a closed party, in the sense that its members might also belong to another party or other political organizations

The general position of the Democratic Alliance was said to be "conservative but not reactionary". It was most clearly distinguished from the National Republican Party in respect of the religious question. It advocated a position of neutrality for the State, opposing equally anti-clericalism and clericalism. The Party accepted reluctantly the income tax and taxes on business; but it was vigorously anti-socialist. In its individualist economic views, it was similar to the National Republican Party. The two Parties also did not differ greatly in respect of foreign policy.

At the outbreak of war, the leader of the Democratic Alliance was Pierre Etienne Flandin. Members of the Alliance belonged in the Chamber of Deputies primarily to the Alliance of Left Republicans and Independent Radicals, with 40 members, and in the Senate to the Democratic and Radical Union with 27 members, and also to the Republican Union.

(3) Popular Democrats.

The Popular Democratic Party was of interest. It was a young party whose general position was that of Christian Socialism. Though it favored strong defense of religious interests, it supported economic and social reform. It had a small Group of 14 in the Chamber, but no group in the Senate.

(4) Action Française.

The most picturesque party and the party of ablest leadership in France was the royalist party, known as L' Action française. It favored restoration of the Monarchy, and advocated as necessary for the purpose direct action. It was strongly anti-parliamentary. As a result, it did not enter electoral campaigns as a party; and there was no group in the Chamber or the Senate corresponding directly to it. Where a few of its members were elected, they sat as independents. It was under the distinguished leadership of Charles Maurras and Léon Daudet. The youth organization of the Party, known as Camelots du Roi (King's Companions), became notorious because of student activities, such as breaking up meetings and the like.

The Party, though strongly Catholic in membership and sympathies, succeeded in 1926 in being condemned by the Vatican. Its relations with the royal family likewise became strained. Following a series of scurrilous press attacks, a vicious physical attack was made on Léon Blum early in 1936. The Party was dissolved. Charles Maurras was tried and imprisoned for incitement to assault. He was later elected by the Académie française to a position among its "immortals". He is said to be very influential at the present time with Marshal Pétain.

(2) Leagues and Groupings.

In normal times, there existed in France many well integrated and well disciplined organizations that had a distinct political flavor, withoug being, in the usual sense of the word, parties. Leagues and groupings of various sorts, including countless organizations of youth and even of children, were set up both by the Left and the Right.

(a) The Left.

(1) Freemasons.

On the Left, one of the most discussed organizations was Freemasonry. It was said to be the "organ of liaison" between Radicals and Socialists. A few years after the World War, Moscow compelled Communists to sever their connection with Masonic Lodges.

Freemasonry in France indubitably possessed a distinctly political character; but the Right undoubtedly displayed a tendency to exaggerate the influence of the Masons in all activities of the Left. The substantial degree of secrecy concerning its activities gave it great potential force. By the same token, assertions with respect to it lacked certainty.

The most distinguishing characteristic of French Masonry was its anti-clericalism. This was persistently denounced by the Right as being anti-religious.

The Vichy regime has been particularly severe in its assaults on secret societies. Its primary purpose has clearly been to attack Freemasonry. It has dissolved Masonic bodies; and it has published lists of membership, with a view to excluding Masons from office. Conversely, Vichy has improved the position of religious groupings by repealing much of the republican legislation against the congregations. However, reports assert that the Dominicans and, to a lesser extent, the Jesuits have proved to be hostile to Vichy and to collaboration.

(2) Civil Rights.

An important Left organization was the League of the Rights of Man and of the Citizen. Its membership was made up largely of Radicals and Socialists. Communists were not allowed by Moscow to belong to this "bourgeois" organization. Officers and directors of the League could not, by the rules, include agents of government, the result being that the outstanding names of the League were those of distinguished persons in academic life, members of the bar and the like.

(3) Union Labor.

The Left was naturally associated closely with organized labor. The General Confederation of Labor (C.G.T. was founded in 1902 through the fusion of two federations distinguished respectively by horizontal and vertical organizations. Twenty years later, the Confederation included an overwhelming majority of organized workers. Then, in 1922, as the result of an earlier split in the ranks of the Confederation, the communist wing formed a General Confederation of United Labor (C.G.T.U.). Numerous attempts to reunite the two organizations were unsuccessful until the foundation of the Popular Front in 1935, at which time the two branches of organized labor came together again in one national federation. Later, a purge of communists took place.

Vichy has dissolved the General Confederation of Labor; and its leader, Léon Jouhaux, is reported to be in prison. It is also reported that industrial labor is in both Zones an important element in resistance to collaboration. The same seems to be true of members of the Catholic unions (jeunesse ouvrière catholique), known as jocistes.

(b) The Right.

Typical Right organizations consisted of various employer associations, tax-payers' leagues, and other bodies that defended privileged religious, economic and social interests. Most in the public eye for a time was the Croix de feu. This was originally an organization of war veterans, founded in 1927. The forces of reaction soon saw its possibilities. Its membership was greatly extended; and it became frankly political in character. The forces were armed and well disciplined, and they demonstrated the faculty of rapid mobilization. Their leader, Colonel de la Rocque, turned out, however, to be a man of indecision, of mediocre intelligence, and of limited personal force. The organization, together with lesser fascist groupings, was dissolved after the victory of the Popular Front in 1936. However, the organization continued with a change of name. Since the advent of the Vichy regime, a considerable part of the membership is reported to have become anti-collaborationist.

d. Political Organizations since the Fall of France

(1) The Unoccupied Zone.

There is no actual official ban placed upon political parties by the Vichy regime. For some reason, it says that political parties are suspended, not dissolved. However, only one party is in reality tolerated in the Unoccupied Zone. The French Legion was declared by Marshal Pétain on August 31, 1941, to be the only national party. This declaration was in effect a recognition of the failure of an earlier effort on the part of Vichy to constitute as a single party a body known as the Rassemblement pour la Révolution Nationale.

The Legion, beginning as an organization of veterans of the Great War, was expanded first to include veterans of the present war and then to include non-veterans. The recruitment of members of the working classes and from among young people was especially desired. In fact, the attempt has been made to compel practically everyone to join, failure to wear the Legion emblem exposing a person for a time to much discrimination, unpleasantness, and difficulty. Membership at the end of 1941 somewhat exceeded 1½ millions. A goal of 5 million had been set.

The national French budget for 1942 allotted 160 million francs to the Legion. A local command has been established in each of the 45 Departments of the Unoccupied Zone and in each of the Colonies. The Germans have forbidden activity of the Legion in the Occupied Zone.

The National director of the Legion was until recently François Valentin. He has been supplanted by a Laval man, Raymond Lachal. A decree of June 6, 1942 placed the Legion under Laval.

Reports indicate that since the beginning of 1942 internal dissension has threatened the Legion with disintegration. Its membership has apparently fallen off sharply, The emblem, which used to be seen everywhere, is reported to be worn much more rarely at present. The insignia consists of the words: "The Legion, - only one means, only one end: France". It displays a miniature map of France, including, interestingly enough, Alsace-Lorraine. The organization in reality has no doctrine.

(2) The Occupied Zone.

The Germans have taken steps of great severity against the population of the Occupied Zone. Only organizations friendly to the Germans are tolerated. The majority of the most despicable of the pro-German French minority are to be found in the Occupied Zone. When Vichy created the Rassemblement pour la Révolution Nationale, the Germans immediately sponsored a Rassemblement National Populaire in the Occupied Zone. Its notorious leaders include Marcel Déat, present editor of L'Oeuvre, former Radical daily, and Jacques Doriot, former communist. Doriot, who is said to be high in the graces of the Germans, has his own French Popular Party, a band of gangsters. Laval's hostility to Doriot is said to be responsible for the recent reentry of Laval into Pétain's good graces.

Membership in the Rassemblement National Populaire has not been extensive. Out of it has grown a Légion Nationale Populaire. This also has not been highly successful. However, it created the "Anti-Communist Legion" to fight with the Germans against Russia. The leader is Eugène Deloncle, head of the Cagoulards, a secret hooded fascist organization which, before the war, plotted the overthrow of the Third Republic and reportedly received the support of Pétain and other well known fascist sympathizers.

The body of the French people of the Occupied Zone has under Nazi rule become exasperated. It is frequently estimated that fully nine-tenths of the population are bitterly anti-German and anti-collaborationist. By the same token, they hope for Allied victory. They are frequently called "Gaullists", but this terminology is merely symbolic of the spirit of resistance. Such people admire General de Gaulle as a soldier; but he and his movement are not as such popular. The population is in sentiment somewhat more favorably disposed towards Americans than towards the British. Only the pro-Nazis are likely to be anti-American. Underground opposition and sabotage are widespread. Though living conditions are somewhat better in the Occupied than in the Unoccupied Zone, the people who have been in close contact with the Germans are vigorous and positive in their hostility.

30. Foreign Policy

a. Rasons and Basis for Vichy Foreign Policy

To understand the present French foreign policy, it is necessary to understnnd the underlying reasons for which France laid down her arms in the summer of 1940. These may be summarized in the following three points:

(1) Defeat of the French and British armies in the low countries and France during May and June of 1940.

(2) Belief held by the majority of the officers of the French High Command that England would very soon fall, and "have her neck wrung like a chicken".

(3) Treason in high places which caused France to break her pledge to England to make no separate peace, and betrayal of the Republican institutions of France.

With the decision to make a separate peace with Germany, and the subsequent break in the Franco-British alliance, the foreign policy of the Vichy Government came to be based, in the main, upon three important factors:

(1) The armistice agreements drawn up in June between the French Government and Germany on the one hand, and between the French government and Italy on the other. (See Appendix)

(2) The course of the war, including the gains and reverses won and suffered by each group of the warring nations. Attempts by the Vichy leaders to determine or influence the outcome of the war have been

reported. The aim is for France to be found on the winning side and receive the benefits of fruitful collaboration with the victor.

(3) The personalities, ideologies, and ambitions of the leading men in power at Vichy. The past records and utterances of the Vichy leaders show that they are hostile to Anglo-Saxon institutions, that they are filled with hatred for England, and see in a German victory the final defeat of French liberal institutions and the consequent triumph of their own brand of fascism.

b. Development of Policy

With England's unexpected survival in the fall of 1940 and her successful home defense during 1941, France, impoverished, hungry, and humiliated at home, agreed to the "principle of collaboration" with Germany in December of 1940. This resulted in closer economic collaboration with the Reich, but left the door open in political and military questions. Regarding her great Empire, Vichy announced a policy which would maintain the integrity and independence (against any aggression) of the territories over which she exercised control.

This imperial policy has had three important exceptions, however,--exceptions motivated, to a considerable extent, by the interests and ambitions of the Vichy leaders. They are:

(1) the so-called "local agreement" which permitted the Japanese to occupy Indo-China and use it as a base of operations against the United States and its allies:

(2) the permission given to Germany to use Syrian airfields for military operations: and

(3) the use of French North African territory and production for the Axis Armies in Libya.

c. Relations with the United States

Following the adoption of a policy of "collaboration" with Germany, and the rupture of diplomatic relations with England and Russia, there occurred sporadic fighting here and there between French troops loyal to Vichy and combined British-Free French forces. Under these circumstances, the Vichy Government felt compelled to maintain as good relations with the United States as possible presumably because of the following three reasons:

(1) the overwhelming popularity of the United States among the French people.

(2) the fact that the United States could supply France and North Africa with needed material, especially food products.

(3) the possibility that the United States might enter the war and turn the tide. In such a case, cordial relations between the Pétain Government and the United States might help in insuring the post-war existence of the Vichy regime, and at the same time be the means for establishing a rapprochement with the rest of the Anglo-Saxon world.

The interests of the United States, on the other hand, dictated that:

(1) the French fleet should not be used against England and her allies, and

(2) that strategic areas of the French Empire, such as North and West Africa, should not be made available to the Axis for military operations.

Such being the conditions, the two governments agreed that, if Vichy would promise not to hand over the French fleet to Germany and not to use North African territory for aiding the Axis, economically or otherwise, the United States would make certain Red Cross food shipments to unoccupied France and gasoline and other commodity shipments to North Africa. On this basis, food supplies were sent to France until the fall of 1941 when it was believed that further shipments would strengthen the German position and possibly never reach the French. Gasoline shipments were made to North Africa through the fall of the same year until it was proved that the French were shipping supplies to the Axis Libyan armies by way of Tunisia. Concurrent with these latter developments, the United States announced Lend-Lease Aid to the Free French forces under General Charles de Gaulle, and some months later the authority of General de Gaulle's National Committee in London was recognized over the territories of the French Empire which it manifestly controls.

The entrance of the United States into the war caused the French people to renew their hope in a victory for the allied nations, and sabotage against the Germans increased to an alarming extent. Consequently, German pressure on Vichy became so great that Marshal Pétain was obliged to accept the pro-German Pierre Laval as head of the government. Following upon this development, the United States Ambassador was called home in protest, but the Vichy Ambassador remains in Washington as an expression of the unwillingness of the Vichy Government, or its master, the German Government, to break off completely with the United States at this time. This is probably due to two reasons.

(1) the Vichy Government, or finally the Germans, are not in a position to control the repercussions in metropolitan France which might conceivably follow upon a complete break in Franco-American relations.

(2) the German Government is not as yet in a position to control or defend such places as strategic Dakar in the event of a United States attack, - an attack which would probably come only after a diplomatic rupture.

Thus, as both American and German pressure increases, the relatively little freedom allowed to Vichy becomes increasingly less; and it becomes more and more clear that she must choose and throw in her lot before very long on one side or the other - if she has not already done so.

31. General Economic Situation

a. Summary

(1) Natural Resources.

France is a country with a fertile soil and a rich endowment of certain resources, but the metropolitan area is deficient in many vital materials. Its production of wheat, potatoes, and meat is nearly sufficient, and it has a surplus of iron ore, bauxite, and potash; but it must import other vital foodstuffs, timber, and essential minerals, including coal and petroleum.

(2) Manufacturing.

The country is not as highly industrialized as Germany or Great Britain, and its industrial plant is not wholly modern and geared to mass production. There is, however, a varied industry, which supplied in normal times most of the domestic market. Outstanding are the textile industries of the northeast and east; the iron and steel industry in the north, east, and center; the armament industry in the same districts and around Paris as well; the automobile and airplane industry in the region of Paris, but with many other widely distributed plants; and the chemical industry centered around Paris, Lille, Lyon, and Marseille. In machine tool production France is seriously deficient in quantity, and the quality of its product has not been high. Operations in all fields are at present handicapped by shortages of material and labor, but industries producing implements of war are working near capacity on German orders.

(3) Transportation and Public Utilities.

The operations of French industry are facilitated by a comprehensive system of transportation and communications. The railroad network radiating from Paris connects all sections of France with the principal producing centers, and the road system on a similar pattern makes the coverage even more intensive. The use and value of both these systems is now, however, seriously restricted, owing to shortages of fuel and rolling stock. The inland waterways provide a valuable supplementary means of transport, especially in the northeast and east. Before the war extensive airplane service was maintained among the principal cities, and at present a restricted air-mail and passenger service is operated in the unoccupied zone. Rapid communication is provided by the national postal system and the State-owned telegraph and telephone system. Among the other public utility services of France the electric power supply is notable, for more than 90 per cent of French houses are supplied with electricity. At present, however, there is an electric power shortage, owing to the scarcity of coal and a recent drought.

(4) Foreign Commerce and Shipping

Foreign commerce is vital to France to meet deficiencies in essential foods and raw materials. Imports, composed primarily of these commodities, were valued at more than $1,500,000,000 in the years immediately preceding the war and considerably exceeded the exports in value. France still maintains a restricted foreign trade with continental countries, and with her colonies and a few foreign countries. The ocean-borne trade is carried by a merchant marine of 1,250,000 gross tons, the remainder of nearly 3,000,000 tons of shipping under the French flag before the war. Marseille is the principal port of France and now almost the only one in use, but on the English Channel, Atlantic, and Mediterranean coasts are a number of large and well-equipped ports.

(5) Finance.

The national currency is maintained on the pre-war basis. The value of the franc is arbitrarily fixed by law, and the government has made an effort to keep prices down; but there is a serious threat of inflation, and in free markets the franc is already greatly devalued.

b. Developed natural resources

(1) Agriculture

In pre-war years France produced nearly enough wheat, potatoes, and meat to supply her own needs but had to import other foodstuffs. The national production of the essential agricultural commodities in recent years is indicated below. At present production is handicapped and restricted by a shortage of fertilizers. For the location of the principal crop areas in the country, see the agricultural and forest map of France.

(All tonnages in the following sections are in metric tons. 1 metric ton equals 1,102 short tons or 2,204.6 pounds.)

(a) Cereals

Production (1,000 bushels)

	Average 1933-37	1940	1941
Wheat	299,649	188,000	220,000
Oats	317,840	284,215	250,000
Rye	30,992	23,000	25,000
Barley	47,970	37,000	46,000
Corn	20,181	17,701	22,000

(b) Potatoes.

In 1939 France produced 550,000,000 bushels of potatoes; in 1940, 300,000,000 bushels; and in 1941, 500,000,000 bushels.

(c) Fruits and Vegetables

In 1937 France produced 2,401,000 tons of vegetables, and 3,150,000 tons of fruit. Post-armistice production figures are not available.

(d) Sugar.

In 1939 France produced 9,370,000 tons of sugar beets and 1,350,000 tons of sugar. In 1940 production of these two commodities fell to 3,858,000 tons and 560,000 tons respectively, but rose in 1941 to 5,100,000 tons and 982,000 tons.

(e) Meat.

The livestock population of France for the crop year of 1941-42 was reported to be 11,000,000 cattle, 6,000,000 sheep, and 3,500,000 pigs; in 1937 there were 15,805,000 cattle, 9,994,000 sheep, and 7,117,000 pigs. Meat production in 1937 amounted to 1,720,000 tons, which was supplemented by 62,000 tons of imports. In 1941-42 production was only 800,000 tons.

(f) Dairy Products.

In 1939 France produced 3,612,000,000 gallons of milk, 170,000 tons of butter, and 210,000 tons of cheese. In 1940 production decreased to 2,166,000,000 gallons of milk, 102,000 tons of butter, and 126,000 tons of cheese.

(g) Hides and Skins.

In 1938 France produced 123,000 tons of hides and skins. Production for the current year will be about 75,000 tons.

(h) Wines.

France normally produced certain varieties of wine in sufficient quantities for export but also imported foreign wines for domestic consumption. The average annual production in the years 1935-39 was 1,537,000,000 gallons. The estimated production in 1941 was 1,122,000,000 gallons.

(i) Textile Fibers.

(Production in metric tons)

	1937	Estimate for 1941
Flax	19,000	25,000
Hemp	4,000	5,000
Wool	8,800	13,600
Rayon	27,000	41,000
Staple fiber	5,000	21,000
Raw silk	500	--

Production was sufficient for domestic needs only in rayon and staple fiber. Flax, hemp, wool, and raw silk were imported in 1937 in quantities larger than the domestic production.

(2) Minerals.

France has abundant supplies of iron ore, bauxite, and potash, and produces more than enough of these minerals for domestic needs. There are also extensive coal deposits in the country; and small quantities of lead (4,640 tons of metal content in 1937), zinc (900 tons of metal content in 1937), antimony (265 tons of metal content in 1934), sulphur (67,000 tons in 1938), and petroleum (69,700 tons in 1937), are produced. The output of other minerals is insignificant. For the location of the principal mineral deposits see the mineral map of France.

(a) Bauxite.

France has bauxite reserves of good quality estimated at 60,000,000 tons and is the world's largest producer of the mineral. The principal deposits are in southern France in the departments of Var and Hérault, and there are small deposits in the departments of Bouches-du-Rhône and Ariège. 682,200 tons were produced in 1937, and present production is reported to be at a high level with about half the product going to Germany.

(b) Iron ore.

Iron ore reserves in France are estimated to be 12,000,000,000 tons. The principal deposits are in the departments of Moselle and Meurthe-et-Moselle, 95 per cent of the production in 1937 coming from these departments; they are now in the "forbidden zone" and under complete German control. Almost all the remainder of the output came from deposits in Normandy near Caen, but there were several other small deposits in various sections of the country. The output in 1937 was 37,839,000 tons and in 1941, 18,000,000 tons; the iron content is about 30 per cent. Pig iron production was 7,914,000 tons in 1937 and 4,500,000 tons in 1941.

(c) Coal.

France has 9,000,000,000 tons of coal reserves, and from them produced 45,334,000 tons in 1937 and 42,000,000 to 44,000,000 tons in 1941. The largest deposits are in the departments of Nord and Pas-de-Calais, which supply about 60 per cent of the output, and in the Moselle basin around Sarreguemines, which provide another 12 per cent. Several smaller deposits are scattered through central and western France, and there is a large basin of lignite at Fuveau near Marseille, which yields a bout 1,000,000 tons annually.

(d) Potash.

There are 340,000,000 tons of potash reserves, measured in terms of pure potash content, in the Department of Haut-Rhin, now under German control. Production in 1937 amounted to 490,000 tons of potash content.

(e) Phosphates.

Deposits of phosphate rock in the department of the Somme, the Yonne, the Haute-Garonne, and the Aisne yielded 82,000 tons of phosphates in 1938, and they probably could be made more productive if the more economical supplies from North Africa were cut off.

(f) Talc.

From the deposits in the Department of the Ariège, France produced about 50,000 tons of talc annually in normal year

(g) Petroleum.

In 1937 France produced only 69,700 tons of crude oil and had to import more than 7,000,000 tons of petroleum product to meet domestic needs. Almost all the production was in the Pechelbronn oil fields in the Department of Bas-Rhin, now held by the Germans. Oil-shale in the Department of Saone-et-Loire yields about 10,000 tons of oil yearly, and a small field has been discovered in the Department of Haute-Garonne. Since the Armistice of 1940 prospecting has been carried on in several southern departments but without notable success.

(3) Forest Production.

(a) Lumber.

France is normally deficient in lumber and must import large quantities. The forest area in the country in 1934 was 26,090,000 acres, but only 9,620,000 acres of this represented timber area. 2,770,000 acres were in deciduous trees, and 6,850,000 acres in coniferous. In 1929, production from these areas was 6,225,000 cubic yard of lumber and 4,135,000 cubic yards of mine timber. The principal lumber producing departments were Landes (1,184,000 cu. yards.), Gironde (354,000 cu. yds.), Maine-et-Loire (334,500 cu. yds.), Jura (273,000 cu. yds.), Puy-de-Dôme (248,500 cu. yds.), and Var (246,000 cu. yds.).

(b) Rosin and Turpentine

In 1938, 22,000 tons of turpentine, and 75,000 to 80,000 tons of rosin were produced in France, and the present production is thought to be about the same. The principal source of supply is the pine woods of the Department of Landes.

(4) Fisheries.

A large variety of edible fish is obtainable off the coasts of France. In the Mediterranean are found anchovies, bass, shrimp, and mullet, and along the Atlantic Coast, sardine, sole, tunny, turbot, coalfish, and oysters. The English Channel is a source of sole, skate, oysters, herring, mackerel, whiting, and shrimp. In 1937, 20,280 vessels were engaged in fishing from French ports, and the value of their catch was $46,800,000., but these figures included vessels and catch in the North Atlantic and North Sea. The principal products of fishing off the French coast were in 1937:

	Catch Metric tons
Herring	64,682
Sardine	38,310
Whiting	26,843
Mackerel	21,299
Coalfish or stockfish	14,537
Skate	14,068
Tunny	10,658
	Catch Numbers
Oysters	1,450,000,000

32. Manufacturing.

a. Principal Industrial Cities.

The following is a list of cities and towns throughout France placed in alphabetical order. Under the name of each place there is information relating to the industrial set-up and output within the area, giving a general idea of the character and the extent of the manufacturing and production existing there before the war or at present in process. In the Appendix, however, will be found lists of French industries classified according to the type of industry, giving broader information on the whole French manufacturing industry before the war. Thus, for a detailed knowledge of the French industrial and manufacturing establishments, the Appendix is recommended.

ABLON (Seine-et-Oise Dept.)

Contains privately-owned powder plant in enemy hands.

ALBERT (Somme Dept.)

"Ateliers G.S.P." maintains machine tool plants. "Etab. Douzille" makes airplane spare parts.

AMBÉRIEU (Ain Dept.)

"S.N.C.A. du Sud-Est" plant for plane construction, may not yet be completed. It is the largest of the south-east plants and designed for large scale bomber production. 400 Liore 45's ordered for delivery in 1942 by French Air Ministry in this plant and Marignane.

AMÉLIE (Haut-Rhin Dept.)

Owned and operated by the State. Salt mining.

AMERMONT-DAMMARY (Meuse Dept.) ?

"Société des Mines d'Amermont-Dammary". Iron ore mining.

ANDERNY-CHEUILLON (Meurthe-et-Moselle Dept. or Meuse)

"Société des Mines d'Anderny-Cheuillon". Iron ore mining.

ANGOULÊME (Charente Dept.) See also Ruelle.

State factory manufactures nitroglycerine (Oct. 1941). Also contains state powder plant.

ANICHE (Nord Dept.)

"Cie. des Mines d'Aniche". Coal mining.

ANNECY (Haute-Savoie Dept.)

"Usines de Roulement à B illes G. Schmid Roost S.A." Produces machine tools.

ANTIBES (Alpes Maritimes Dept.)

"S.N.C.A. du Sud-Est". Small hanger to effect airplane repairs and testing.

ANZIN (Nord Dept.)

"Cie. des Mines d'Anzin". Coal mining.

ARACHON (Gironde Dept.)

"Au Roux". Naval contractor.

ARANDON

Contains privately-owned powder plant.

ARDENTES (Indre Dept.)

"S.N.C.A. du Sud-Ouest". Probably constructs air fuselages and spare parts.

ARGENTEUIL (Seine-et-Oise Dept.) See Paris area.

ARGENTIÈRE (Hautes-Alpes Dept.)

Plant produces aluminum estimated at 8,000 tons for 1942.

ARRIÈGE, Dept. of

"Sabart" produces aluminum, estimated capacity for 1942 - 6,000 tons. "Auzat" aluminum production for 1942 estimated at 5,000 tons. Deposits of talc yielding 50,000 tons annually are located on northern slope of Pyrenees in Dept. of Arriège.

ART-sur-MEURTHE (Meurthe-et-Moselle Dept.)

"Société des manufactures de glaces et produits chimiques de St. Gobain, Chauny, and Cirey". Salt mining.

ASNIÈRES-sur-SEINE (See Paris area)

SAINT AUBAN (Alpes Maritimes Dept.)

Factory produces alumina, estimated capacity for 1942 - 50,000 tons. Working for Germany.

AUBERVILLIERS (Seine Dept.) See Paris area.

AUBOUÉ (Meurthe-et-Moselle Dept.)

"Société des hauts fourneaux et fonderies de Pont-à-Mousson". Iron ore mining. Contains privately owned powder plant (in enemy hands).

AUTUN (Saône-et-Loire Dept.)

Contains a petroleum refinery.

AUXERRE (Yonne Dept.)

"Etab. Guillier Fils et Cie" is a firm of wood working, machine-tool manufactures.

L'AVERA (Bouches-du-Rhône Dept.)

Contains a petroleum refinery.

BACALAN (See Bordeaux area) (Gironde Dept.)

BAGNÈRES-de-BIGORRE (Hautes-Pyrénées Dept.)

"S.N.C.A. du Midi" well-equipped for making almost complete airplanes, except air-engines.

LA BARASSE (Bouche-du-Rhône Dept.)

Factory produces alumina, estimated capacity for 1942 - 20,000 ton

BARRINGS DUC

"Etab. Dyckhoff" produces hoisting equipment for heavy industries at full capacity.

BASSES ALPES, Dept of

"St. Auban" produces aluminum estimated at 6,000 tons for 1942. Magnesium firm here.

BASSIN OF BISSORTE (east of Grenoble) Isere Dept.

"La Saussaz" produces aluminum, estimated capacity for 1942 - 3,500 tons, working for Germany. "Calypso" produces aluminum, estimated capacity for 1942 - 3,500 tons.

BASSINS (See Bordeaux area)

BASSOMPIERRE (Moselle Dept.)

"Société metallurgique de Knutange". Iron ore mining.

BATIGNOLLES (See Paris area)

BAYONNE (Basses-Pyrénées Dept.) See also Blancpionon.

"Chantier de l'Aclom" builds ships.

BEC d' AMBES (Gironde Dept.)

Contains a petroleum refinery.

BEGLES (Gironde Dept.)

"Georges Irat" makes submarine engines. "S.N.C.A. du Sud-Ouest" manufactures spare parts, particularly wings and fuselages for airplanes.

BELFORT (Haut-Rhin Dept.)

"Alsthorm" makes ammunition . "Société Génerale de Construction Electro-Mécanique " produces shell blanks of 75 mm. model 1928 type.

BERGERAC (Dordogne Dept.)

Contains state powder plant. Formerly produced 36,000 tons of nitrocellulose.

BERRE (Bouches-du-Rhône Dept.)

"S.N.C.A. du Sud-Est" formerly specialized in seaplane repairs and construction. Contains a petroleum refinery.

BESANÇON (Doubs Dept.)

Contains factories (in enemy hands) capable of making artillery, anti-aircraft, anti-tank, and naval guns.

BIARRITZ (Basses-Pyrénées Dept.)

"Société L. Breguet" makes spare parts and assembles complete aircraft.

BISCAROSSE

"Société L. Breguet and Société Avions Latécoere" contains a complete servicing unit as well as assembly unit for 25-30 planes a month.

BILLANCOURT (See Paris area)

BILLY-BERCLAU (Pas-de-Calais Dept.)

Contains privately-owned powder plant (in enemy hands).

BISCHWILLER (Bas-Rhin Dept.)

"S.A.C.M." maintains machine tool plants. "Société Alsacienne de Constructions Mécaniques" manufactures locomotives, boilers, stationary steam and gas engines, cables, and textile machinery.

BLANC PIGNON (Basses-Pyrénées or Pas-de-Calis Dept.)

Contains high explosive factories now producing 3-4,000 tons of T.N.T.; 3 out of 5 plants now in operation.

BLANCPIONON

Contains state powder plant. Present output in T.N.T. is 3-4,000 metric tons per annum. 3 out of 5 plants located here now working.

BLANZY-MONTCEAU (Saône-et-Loire Dept.)

"Société des Mines de houille de Blanzy". Coal mining.

BLENDECQUES (Pas-de-Calais Dept.)

Contains a synthetic oil plant. Capacity unknown.

BOIS COLOMBES (See Paris area)

BORDEAUX and surrounding area (Gironde Dept.)

"S.N.C.A. du Sud-Ouest" Bloch (principal plant of this firm in Bordeaux area) making trainers and twin-engine bombers (Jan.-Feb. 1942); assembling planes of "Bloch" 175 type (Jan. 1942); working on Condor 4 motor transport planes (Aug. 1941); also factories capable of producing artillery, anti-aircraft, anti-tank and naval guns; contains privately-owned powder plant (in enemy hands); "Forges et Chantiers de la Gironde" building 2 cargoes for France, 2 destroyers - one for France, other for Germany, 8 tugs for German Navy, 1 sloop for France, reported that the Naval stores here are apportioned on the basis of 60% for Germany, and 40% for France. "Schneider Plant" specializes in shell cases and light naval alloys. "Société Matford" (removed from Strasburg). In June 1940, complete factories existed for the manufacture of Rolls Royce aéro-engines. "C.I.M.T." now employed in testing of German aviation motors. "Société Anon. Française Timken" is an important firm in French bearing industry. Reported to be closed down, but possible that it may reopen.

Bacalan

"Société Brigati" formerly manufactured spare parts for aéro-engines; principally cranes and shafts.

Bassins

Contains state powder plant.

Fleac

Contains powder plant formerly producing 28,000 tons of nitrocellulose, 3,000 tons of amatol, 1,000 tons of nitroglycerine yearly. Still producing 1,000 tons of nitroglycerine yearly.

St. Medard

Contains factory formerly producing 25,000 tons of nitrocellulos yearly, 2,000 tons of cordite and still producing 1,000 tons of the latter. Contains also national powder plant making centralite as well as normal propellant powders.

Merignac

"S.N.C.A. du Sud-Ouest" produces planes of the Bloch type, including single-engined fighters and twin-engined bomber reconaissance type. Output: 30 to 40 per month.

LE BOUCHET (Vienne Dept.)

Contains state powder plant.

BOULOGNE-sur-MER (Pas-de-Calais Dept.)

Contains privately-owned powder plant (in enemy hands)

BOULOGNE-sur-SEINE (See Paris area)

LE BOURGET (Seine Dept.)

Airfield. Final assembly, testing, and repair of planes.

BOURGES (Cher Dept.)

Contains factories (in enemy hands) capable of manufacturing automotive vehicles; also artillery, anti-aircraft, anti-tank, naval guns, and projectiles. "S.N.C.A. du Centre" formerly assembled the Breguet 693 twin-engined bombers.

BOUZONVILLE (Moselle Dept.)

Factory now in use. Formerly manufactured commercial explosives.

BRAQUEVILLE

Contains state powder plant.

BREST (Finistère Dept.) See also Port-de-Bouc.

"Pouderie St. Nicholas" produces fuses and 75 mm. shells. Personnel: 4-5,000 (Oct. 1941). No information on naval dockyards. Contains a petroleum refinery.

BRIEY (Meurthe-et-Moselle Dept.)

Contains privately-owned powder plant (in enemy hands). In Dec. 1941, iron ore production was 810,000 tons, with continued depletion of stocks. Contains great cast iron and steel foundries.

BRIGNOLES (Var Dept.)

One of the two principal centers of bauxite mining is nearby.

BRUAY-en-ARTOIS (Pas-de-Calais Dept.)

"Cie. des Mines de Bruay". Coal mining.

BUC (Seine-et-Oise Dept.)

"S.N.C.A. du Nord". Small plant for final assembly and testing of Potez aircraft.

CACHAN. (See Paris area)

CAEN-BLAINVILLE (Calvados Dept.)

"Chantiers de France" building 10 oil barges for German Navy, two colliers for France, two other (unknown) ships for France.

CAEN-CARPIQUET (Calvados Dept.)

"S.N.C.A. du Nord" formerly used for assembling finished planes.

CALVADOS, Dept of

"St. Martin des Entrées". Produces 25 mm. anti-aircraft shells.

CALYPSO (Hautes-Pyrénées Dept.)

Contains aluminum plants.

CANNES (Alpes-Maritimes Dept.)

"S.N.C.A. du Sud-Est" formerly specialized in manufacture and repair of military hydroplanes.

CARL FERDINAND (Dept. of Moselle, now under German control)

"Société des forges et aciéries du Nord et Lorraine". Iron ore mining. (Name of mining concession)

CARMAUX (Tarn Dept.)

"Société des Mines de Carmaux". Coal mining.

CARRIÈRES-sur-SEINE (Seine-et-Oise Dept.)

"Hispano Suiza" underground factory used by Germans for unknown purposes.

CASTRES (Tarn Dept.)

"Etab. Ernest" manufactures boilers and copper ware, also punching machines, planes, millers, and boring machines.

CAUDEBEC (Seine-Inférieure Dept.)

"S.N.C.A. du Nord" used almost exclusively for spare parts for Potez planes.

CHALONS-sur-MARNE (Marne Dept.)

95% of cement manufacture here requisitioned by Germans.

CHALONS-sur-SAONE (Saône-et-Loire Dept.) See also Le Creusot.

Contains factories (in enemy hands) capable of producing artillery, anti-aircraft, anti-tank, and naval guns. French Air Ministry has ordered 200 Bloch 175's for delivery during 1942. "Schneider Plant" makes boilers, bridges, harbor installations, ships, torpedo boats and submarines.

ST CHAMAS (Bouches-du-Rhône Dept.)

Contains state powder plant.

ST. CHAMOND (Loire Dept.)

"Forges et Aciéries de la Marine et de Homecourt" makes armour plate for tanks. Contains factories capable of producing artillery, anti-aircraft, anti-tank, and naval guns, torpedo components, 300, 500, and 1,000 Kg. bombs, 75 mm. to 420 mm. shells. Personnel: 4,000 (Oct. 1941).

CHAMPAGNE-sur-SEINE (Charente Dept.) ?

Contains factories (in enemy hands) capable of producing artillery, anti-aircraft, anti-tank, and naval guns. "Schneider Plant" specializes in electrical machines and equipment.

CHATEAUDUN (Eure-et-Loire Dept.)

"Société Optique et Précision de Levallois" makes stereoscopic range finder with fixed scale, stereoscopic range-finders for artillery; height finders.

CHATEAU GLISSOLES

"S.N.C.A. du Nord". Small plant for aeroplanes and aero-engine construction.

CHATEAUROUX (Indre Dept.)

"S.N.C.A. du Sud-Ouest formerly produced the Bloch 131 bomber and the Bloch 151 and 152 fighters. Former output 2 per day.

CHATELLERAULT (Vienne Dept.)

"Manufacture Nationale d'Arms" makes standard French service rifle; also machine guns for aircraft; makes telescopic gun sights and tank periscopes. Contains factories capable of making tanks (in enemy hands), also of making artillery, anti-aircraft, anti-tank, and naval guns.

CHATILLON (See Paris area)

CHAUNY (Aisne Dept.)

Considerable production of acids here.

CHERBOURG (Manche Dept.)

"Amiot" produced the Amiot 351 twin-engined bomber plant (greatly damaged during invasion). State arsenal building 2 submarines. "Amiot" also specialized in the construction of large seaplanes. Naval arsenal producing pivot supporters for anti-aircraft machine guns. Repairing and overhauling lorries.

CHOLET (Maine-et-Loire Dept.)

"Société Franc. Radioélectrique" making 600 portable 15 W. transmitters. Receivers of Telefunken type.

LA CIOTAT (Bouches-du-Rhône Dept.)

"Société Provençale" shipbuilders - reported that present activity is not great.

CLERMONT-FERRAND (Puy-de-Dôme Dept.)

Contains privately-owned powder plant. "Michelin", great French tire company, now producing a new type of metallic tire - not working for Germans. "S.N.C.A. du Centre" formerly used for final assembly, testing and repairs.

CLICHY (See Paris area)

COMPIEGNE (Oise Dept.)

"Englebert" tire plant at Clairoix is now producing for Nazis;

"Société de St. Gobain" at Thanrotte now producing glass for Germans. The "Bözel Maletra" factories, "Coller et Gelatines Rousselot" at Ribe Court as well as "Coller et Gelatines" all producing chemical products.

LA CORNEUVE (See Paris area)

COURBEVOIE (See Paris area)

COURCHELETTE (Nord Dept.)

Contains a petroleum refinery.

COURRIÈRES (Pas-de-Calais Dept.)

"Cie. des Mines de Courrières". Coal mining.

CRAVANT (Yonne Dept.)

"S.N.C.A. du Sud-Est" plant for plane construction may not be completed.

LE CREUSOT (Saône-et-Loire Dept.)

"Schneider et Cie" has a German contract for machine-gun tanks, jackets, breech blocks and screws of unknow caliber and type; 7,544 gun barrels (for Finland); heavy castings and forgings; machine tools; locomotive industry; bars and sheets of special steels largely for chemical industry and heavy components for hydraulic presses. Small tank production, also capable of producing artillery, anti-aircraft, anti-tank and naval guns, projectiles and SAA. "Schneider et Cie" produced tanks (20 a month) "Char B" before occupation, none since.

DAMMUS

Contains a cement factory apparently now producing.

ST. DENIS (See Paris area)

DE WENDEL (Moselle Dept., now annexed to Germany)

"Les Petit-fils de François Wendel et Cie." Coal mining. Iron ore mining.

DONGES (Loire-Inférieure Dept.)

Contains a petroleum refinery.

DOUAI (Nord Dept.)

"Etablissement Arbel" producing 100 tank cars (Nov. 1941)

DOURGES (Pas-de-Calais Dept.)

"Société des Mines de Dourges". Coal mining.

DROCOURT (Pas-de-Calais Dept.)

"Cie. des Mines de Vicoigne". Coal mining.

DROITAUMONT (Meurthe-et-Moselle Dept.)

"Schneider et Cie.". Iron ore mining.

DUNKERQUE (Nord Dept.)

"Ateliers et Chantiers de France" building tankers for France and Germany; also a petroleum refinery here.

ERROUVILLE (Meurthe-et-Moselle Dept.)

"Société des Mines d'Errouville." Iron ore mining.

L'ESCARPELLE (Oise Dept. ?)

"Cie. des Mines de l'Escarpelle". Coal mining.

ESQUERDES (Pas-de-Calais Dept.)

Contains state powder plant. Formerly produced 7,300 tons yearly of Amatol.

ST. ÉTIENNE (Loire Dept.) See also St. Chamond and Firminy.

"Jacob Holtzer" makes field-guns. "Manufacture d'Arms" makes anti-aircraft and anti-tank guns, machine guns and cartridges, also can make naval guns. "Société Nouvelle des Usines de la Chaleassière" makes heavy-duty lathes, presses, planeing machines. "Société de Materiel de Construction" manufactures spare parts and complet Hispano-Suiza aero-engines.

FIRMINY (Loire Dept.) Near St. Étienne.

Contains factories capable of producing artillery, anti-aircraft, anti-tank, and naval guns. "Etablissement Jacob Holtzer" produces shells for 155 and 220 mm. guns and howitzers and infantry mortars. Personnel: 3,000 (Dec. 1941) in three shifts.

1470

FIVES-LILLE (Nord Dept.)

"Etablissement Charles Berthiez" manufactures boring machines of exceptional size and weight.

FLEAC (See Bordeaux area)

FRONTIGNAN-SÈTE (Hérault Dept.)

"Socony Vacuum Refinery" is a petroleum refinery; crude oil charging capacity is 4,500 barrels a day. Gasoline, kerosene, fuel oil, and gas oil, and butane are manufactured. (See Appendix for other details).

GARDANNE (Bouches-du-Rhône Dept.)

Factory produces alumina, estimated capacity for 1942 - 60,000 tons. Working for Germany.

SAINT GAUDENS (Haute-Garonne)

Oil fields, whose potential daily production is 200 tons.

GENNEVILLIERS (See Paris area)

GIRAUMONT (Meurthe-et-Moselle Dept. or Oise Dept.)

"Société des Mines de Giraumont". Iron ore mining.

GIVOIN (northern France)

"Altos Hoonos Prenat". Makes benzoil from coke for the Germans.

GONFREVILLE (--L'Orches) (Seine-Inférieure Dept.)

Contains a petroleum refinery.

GRAFENSTADEN (Bas-Rhin Dept.)

"S.A.C.M." maintains machine tool plants, which manufacture locomotives, boilers, stationary steam and gas engines, cables, and textile machinery.

LA GRAND 'COMBE (Gard Dept.)

"Cie. des Mines de la Grande Combe". Coal mining.

GRAVENCHON (Seine Inférieure Dept.)

"Socony Vacuum" refinery - crude oil charging capacity is 6,000 barrels daily. The large storage tanks have been destroyed, the filling, packaging and shipping departments were also destroyed, but process equipment left intact. (See Oil Appendix for other details).

GRENAZ

"Cie. des Mines de Bethune". Coal mining.

GRENOBLE, east of; (Isère Dept.)

"De la Praz" produces aluminum, estimated capacity for 1942 - 2,500 tons.

GUYANCOURT (Seine-et-Oise Dept.)

"Société Caudron-Renault" formerly specialized in final assembly of Caudron-Renault aircraft, possibly bombers.

HAGENAU (Bas-Rhin Dept.)

"Pechelbronn" (Société d'exploitation minières). Petroleum.

HARANCOURT (Ardennes Dept.)

"Solvay et Cie.". Salt mining. Contains the largest of all alkali plants in France (near Nancy). There are brine deposits here as well as a tremendous salt industry.

HARFLEUR (Seine-Inférieure Dept.) See also La Rivière.

Contains factories (in enemy hands) capable of making artillery, anti-aircraft, anti-tank, and naval guns. "Schneider" plants manufacture guns from the smallest to 155 calibre.

HAUTE SAVOIE, Dept. of

"Chedde" produces aluminum, estimated capacity off 3,000 tons for 1942.

HAUTMONT (Nord Dept.) See Paris area.

HAVRE (Seine-Inférieure Dept.) See also Harfleur.

"Companie Electro-Mécanique" made two large generator sets for Germany (Aug. 1941). Contains factories (in enemy hands) capable of making artillery, anti-aircraft, anti-tank, and naval guns. "Chantiers Aug. Normand" building trawlers for France and Germany. "Forges et Chantiers de la Mediterranée" building colliers and patrols for France and Germany respectively. "S.N.C.A. du Nord" making planes. "Société le Nickel" has a refinery here which was producing metal at the beginning of June 1942. "Schneider" has made aéro-engines and submarine spare parts.

HÉRY (Yonne Dept.)

Contains privately-owned powder plant.

HOMÉCOURT (Meurthe-et-Moselle Dept.) near Nancy.

"Forges et Aciéries de la Marine et d'Homécourt" makes armour plate. Iron ore mining. Working for Germany.

LA HOUVE (Moselle Dept.)

"Société houillière de Sarre et Moselle". Coal mining.

ISÈRE, Dept. of

There is a magnesium plant here.

ISSY-les-MOULINEAUX (See Paris area)

ISTRES (Bouches-du-Rhône Dept.)

"Potez" airplane factory repairing German planes.

IVRY-sur-SEINE (See Paris area)

JARNY (Meurthe-et-Moselle Dept.)

Contains privately-owned powder plant (in enemy hands).

ST. JEAN DE MAURIENNE (Savoie Dept.)

Contains aluminum plants. Produces aluminum with an estimated capacity of 10,000 tons for 1942.

JOEUF (Meurthe-et-Moselle Dept.)

"De Wendel et Cie." Iron ore mining.

JOUDREVILLE (Meurthe-et-Moselle Dept.)

"Société des Mines de Joudreville." Iron ore mining.

JUNGHOLZ (Haut-Rhin Dept.)

"S.A.C.M." has machine-tool, locomotive, boiler, stationary steam and gas engine, cables, textile machinery production facilities.

LAMARCHE-sur-SAÔNE (Vosges Dept.)

Contains privately owned powder plant (in enemy hands).

LANDRES (Meurthe-et-Moselle Dept.)

"Société des Aciéries de Micheville". Iron ore mining.

LATTINGHEM

Contains a cement plant apparently now producing.

LENS (Pas-de-Calais Dept.)

"Société des Mines de Lens". Coal mining.

LEVALLOIS-PERRET (See Paris area)

LIENEN

"Société houillière de Lienen". Coal mining.

LILLE (Nord Dept.)

"Accumulateurs Tudor" makes submarine accumulators (March 1941); contains factories (in enemy hands) capable of making artillery, anti-aircraft, anti-tank, and naval guns. "Étab. Charles Berthiez" of Fives-Lille, precision instruments and machine tools. Lille also one of the chief centers of the French chemical production. There is a considerable output of heavy chemicals, acids, salts, fertilizers, dye intermediates, etc. - "Kuhlman" plant; "International Harvester" shipping spare parts of agricultural machinery to unoccupied France. Lille, and the adjacent areas of Roubaix-Tourcoing, is the great textile center of France.

LIVRY

Contains privately-owned powder plant (in enemy hands).

LONDE-les-MAURES (Seine-Inférieure?

"Schneider" plant manufactures small torpedoes, small castings, etc.

LOOS LA LILLE (Nord Dept.)

"Kuhlman" plant produces heavy chemicals, acids, salts, glue and gelatine, bone blades.

LORIENT (Morbihan Dept.)

Naval dockyard - no information.

LONGWY (Meurthe-et-Moselle Dept.)

Contains factories (in enemy hands) capable of producing anti-aircraft, anti-tank, and naval guns; contains also great steel and cast iron plants, production from which goes to Germany.

SAINT LOUIS-les-AGYDADES (Southern France)

Factory produces alumina, estimated capacity for 1942 - 30,000 tons.

LUMBRES (Pas-de-Calais Dept.)

Contains a cement plant apparently now producing.

LUNÉVILLE (Meurthe-et-Moselle Dept.)

"Vandergrift Société Lorraine des Anciens Etablissements de Dietrich" produces freight cars and armored cars for the German Army.

1470

LYON (Rhône Dept.)

"Sigma Co." at Venissicuz working on order for 1,000 Gnome-Rhône motors (Feb. 1942); 600 motors reported in Oct. 1941). "Companie d'Application Mécanique" maintains bearing plants. Lyon also one of the chief French centers of chemical production, and acid production. "Berliet" and "Rochet-Schneider" producing 100 vehicles per month. "Verdol S.A." makes machine gun barrels, locks, and bases for heavy machine guns, ammunition belts and cases. "Saurer" producing trucks with load capacity of 4½ tons.

LA MAILLERAYE

Contains a petroleum refinery.

LE MANS (Sarthe Dept.)

Contains factories (in enemy hands) capable of making projectiles (and SAA). "Gnome-Rhône" new plant built for producing aero-engines.

MARIGNANE (Bouches-du-Rhône Dept.)

"Gnone-Rhône" making plane motors (Jan. 1942); making machine tools (Dec. 1941); makes aircraft engines (Feb. 1942). "S.N.C.A. du Sud-Est" formerly produced Leo. 45's, but output was small.

MARLES

"Cie des Mines de Marles". Coal mining.

MARSEILLE (Bouches-du-Rhône Dept.)

This city is one of the chief centers of French chemical production as well as great Mediterranean port; there are a great number of peanut oil refineries here and also storage tanks. "Kuhlman" plant produces sulphuric acid, fertilizer, fungicides and insecticides. "S.N.C.A. du Sud-Est" built for reassembly and repair of damaged aircraft.

SAINT MARTIN DE GRAU

Contains privately-owned powder plant.

MAUBEUGE (Nord Dept.)

"Sculford-Fockedey et Cie." makes centre lathes, wheel lathes, radial drills, milling machines, shears, punching machines.

SAINT MEDARD-en-JALLES (Gironde Dept.)

Contains state powder plant (in enemy hands).

SAINT MEDARD (See Bordeaux area)

MELUN (Seine-et-Marne Dept.)

85% of cement manufacture was reported requisitioned by the Germans (Oct. 1941).

MERKWILLER (Bas-Rhin Dept.)

Oil wells and refinery of "Pechelbronn" formerly produced an average of between 75,000 and 80,000 tons of crude oil per annum. Refining is at oil field and produces "Antar" lubricating oil. (See Appendix).

MERIGNAC (Gironde Dept.) See Bordeaux area.

METZ (Moselle Dept.) See Rombas.

MEULTE (probably in northern France)

"S.N.C.A. du Nord" formerly produces "Potez" 63-11 twin-engined general purpose aircraft. Following Armistice activity was limited to repair work on German craft.

MEURCHIN (Pas-de-Calais Dept.)

"Société des Mines de Lens". Coal mining.

ST. MICHEL (Moselle Dept.)

"Société Minières des Terres Rouges". Iron ore mining.

MIRIGNAN

"Potez" factory repairing German planes.

MONTEREAU (Seine-et-Marne Dept.)

"S.N.C.A. du Sud-Est" constructed for the manufacture of spare parts.

MONTLUÇON (Allier Dept.)

"Chatillon-Commentry et Nouves Maison" makes fitted-gun barrels and components. Capable of producing shells and bombs. Personnel: 1,000 (in Nov. 1941). "Dunlop" required to manufacture self-sealing tanks for planes.

MONTRAMBERT

"Société des Houillères de Montrambert et de la Berandière". Coal mining.

MONT-ROUGE (Moselle Dept.)

"Société Minière des Terres-Rouges". Iron ore mining.

MONZERON

"S.O.M.U.A." has machine tool plants. They are engaged mainly in tank and lorry production for the Germans. "Société Industrielle Générale de Moteur d'Aviation" formed to make Bristol aero-engines.

MOULINS (Allier Dept.)

"Etab. Lefebvre" makes radial drills.

MOULIN BLANC (St. Marc)

Contains state powder plant formerly producing 14,000 tons yearly of nitrocellulose (plant destroyed in 1940) and 350 tons of nitroglycerine, which it still produces.

LA MOURIÈRE (Haute-Saône Dept.)

"Société des Mines de Fer de la Mourière". Iron ore mining.

MOUTIERS (Savoie Dept.)

"Société de Moûtiers". Iron ore mining.

MULHOUSE (Haut-Rhin Dept.)

"Société Alaacienne de Constructions Mécaniques" manufactures locomotives, boilers, stationary steam and gas engines, cables, and textile machinery. Contains also privately-owned powder plant (in enemy hands). "S.A.C.M." maintains machine tool plants.

MUREAUX (Seine-et-Oise Dept.)

"S.N.C.A. du Nord" adjusting and tuning up Messerschmitt 110; This firm formerly produced seaplanes and also "Potez" 63. Capacity was 60 per month. ME. 109's now being assembled, repair work also.

NANCY (Meurthe-et-Moselle Dept.) See Thionville.

NANTES (Loire-Inférieure Dept.)

"S.N.C.A. de l'Ouest", Château Bougon, repairs planes, manufactures trucks and spare parts (Aug. 1941); planning to manufacture Heinkels (Nov. 1941); contains privately-owned powder plant (in enemy hands). During 1938-39 produced 968 Morane

405 single-engined fighters, later Leo. 45 twin-engined bombers. Now repairing HE. 111 bombers, and components of the same type. "Société Française Radio Électrique" producing for Germany. "Chantiers Dubigeon" makes 12 water barges for German Navy and 1 trawler; 2 trawlers for France; 1 submarine for German Navy. "Chantiers de Bretagne" made 5 trawlers for German Navy, making 6 tugs for German Navy, 1 collier for France and 1 for Germany; one destroyer for German Navy; 3 torpedo boats and two cargo ships. " Chantiers de la Loire" making 10 tugs and 2 lighters for German Navy; made one destroyer and 3 trawlers for German Navy; making 2 colliers for France, 4 torpedo boats and one trawler. " Usine Carpentier" makes 37 mm. AT shells, hand grenades, machine-gun ammunition and 20 mm. aircraft cannon shells. Personnel: 2,000 (Nov. 1941). "Estab. H. Ernault" makes lathes, including heavy duty and semi-automatic lathes, milling, reaming, and copying machines, gear-cutters,and milling cutter grinders. "Société Industrielle pour l'Aeronautique" reassembled damaged planes.

SAINT NAZAIRE (Loire-Inférieure Dept.)

"S.N.C.A. de l'Ouest" formerly specialized in seaplanes, and received imported American Curtiss and Glen-Martin machines. Now producing German float planes of the "Arado" type. "Chantiers de la Loire" is building one 9,000 ton refrigerated cargo ship, 8 cargo vessels for Germany; 2 cargo vessels, 1 collier, 2 aircraft tenders, and 2 tankers which are either for France or Germany; 2 torpedo sloops, and 11 floating docks. "Chantiers de Saint Nazaire" (Penhoet) built aircraft carrier Joffre, destined for the German Navy (Feb. 1942); for German Merchant Marine -

3 cargo vessels; for France one oil tanker; also 2 aircraft supply vessels, 4 patrol boats under construction. "Escoublac" plant for final assembling and repair on planes built in St. Nazaire "S.N.C.A. de l'Ouest".

NEUFCHATEL (Vosges Dept.)

Cement factory here producing in large quantities (Nov. 1941).

NEUILLY-sur-SEINE (See Paris area)

NEVERS-FOURCHAMBAULT (Nievre Dept.)

"S.N.C.A. du Centre" factory was to be underground in 1940 - condition unknown.

NICE (Alpes-Maritimes Dept.)

Contains privately-owned powder plant at Grasse, near Nice. Is center of French perfume industry.

NOEUX-les-MINES (Pas-de-Calais Dept.)

"Cie. des Mines de Vicoigne". Coal mining.

OISSEL (Seine-Inférieure Dept.)

Contains state powder plant (in enemy hands) which formerly produced melanite; no present output. Also a very large dye plant here.

ORIGNY-SAINTE-BENOIT (Aisne Dept.)

95% of cement manufacture here requisitioned by the Germans.

OSTRICOURT (Nord Dept.)

"Cie. des Mines d'Ostricourt". Coal mining.

OTTANGE (Moselle Dept., under German control)

"Société des Hauts-Fourneaux et Aciéries de Fifferdange-St. Ingbert-Rumelange"."Société minière Ottange I^1." Iron ore mining.

SAINT OUEN (See Paris area)

LA PALLICE, near Rochelle (Charente-Inférieure)

Contains state powder plant. "Chantiers Navals Delmar" builds ships.

PANTIN (See Paris area)

PARIS, and surrounding area. (Seine Dept.)

"Renault" factories make: tank engines, light 13 ton tanks. Batignolles factories make recoil cylinders and gun turrets, "Hispano

Suiza" on Boulevard Brune, manufactures spare parts for motors (Dec. 1941). "Peugeot" made 800 three and one-half ton trucks (May 1941). "Gnome-Rhône" on Boulevard Kellerman, produces airplane motors (July 1941). "Ateliers G.S.P." has machine tool plants. "Optique et Mécanique de Haute Precision" makes height finders. "Precision Moderne", rue St. Charles, makes AA fire control apparatus. "Société Indépendante de Télégraphie sans Fil", rue Montrouge, make transmitters and tubes for military purposes and employs about 2,000 people. "Société Industriel de Téléphone", 4 rue des Entrepreneurs, although lacking raw materials, uses latex experimentally for gas-proof fabrics, manufactures radios. "Le Matérial Téléphonique" manufactures radios, reported to have large German order on hand. "Compagnie Générale de Construction Téléphonique" produces radios; reported to have large German order on hand, and filling them as well as possible.

Paris is one of the chief centers of chemical production, and soaps and toilet articles are manufactured here. "Panhard Levasso has on order three million tank-tread units for the Germans. "Farman" (works near Billancourt) practically entirely destroyed by R.A.F. "Société Générale d'Automobile Americain" making tanks or tank parts. "Société Louis Breguet" completes construction and assembling of planes. "Citroen" producing trucks of which entire output goes to the Germans. Reported production of 60 trucks daily. "Panhard" formerly produced transports, and also "Fiat". "Fiat" made 500 three and one-half ton trucks (May 1941). " Matford" producing trucks with load capacity of 3 tons; "Peugeot" produces trucks with a load capacity of 2 tons. "Société l'Appareillage Aéronautique" manufactures gyroscopic instruments. "Ateliers J. Carpentier" produces periscopes for the German Navy.

"Société Générale Optique et Mécanique de Precision" produces telescopes for tanks, height and range finders. "Société Anon. La Precision Moderne" produces fire control gear for naval vessels, predictors, sighting gear for 25 mm. anti-aircraft and anti-tank guns. "Etab. Barbier Benard et Turenne" produces marine periscopes, sound locators, range connectors, anti-aircraft sights, search lights. Also has factories in the Paris suburbs of Aubervilliers and Pantin. "Parra-Montois et Cie" optical glass manufacturer, produces range finders, predictors, periscopes and other military equipment. "Abonnement Monoplaque" produces starter and radio accumulaters. "Société Industrielle des Téléphones" makes accumulator containers. "Lapipe et Wittmann" makes heavy duty presses and boiler shop tools such as punching machines. "Bordier et Gromadvinski" makes centerless grinding machines. "Société Anon. des Etabs. Cuttat" produces lathes, including two-spindle automatic ones, turret lathes, and a watchmaker's lathe; also surface grinders, threading machines, milling machines, and gear-cutting machines. "Ancien Etab. Sauter Harle" produces searchlights and sound locators.

Argenteuil

Contains factories (in enemy hands) capable of making automotive vehicles and aircraft motors. "S.N.C.A. du Sud-Est" specializes in the construction of spare parts, wings and fuselages. "Société Nationale de Construction de Moteurs" formerly was a complete unit for the manufacture of aero-engines, including forges and foundries. "S.A.G.E.M." has a German naval order for receiver sets.

Asnières

Contains factories (in enemy hands) capable of making automotive vehicles. "Société Anon. Française Timken" produced tapered roller bearings. "Delacosta" formerly produced rubber toys and gas masks, now producing weather survey balloons. "Société Industrielle pour l'Aéronautique" specialized in repair to damaged aircraft.

Aubervilliers

Contains factories (in enemy hands) capable of producing artillery, anti-aircraft, anti-tank, and naval guns. "Étab. Malicet et Blin S.A." makes bearings of standard type. Employs about 1,000 people.

Batignolles

Factory produces steering gears for tanks.

Billancourt

"Renault" formerly produced Caudron fighters and Goeland twin-engined aircraft. Now making a transport type (May 1942). 300,000 orders, Renault producing empty shell and various small components (seriously bombed); repair and reconstruction of German tanks; great production of French tanks. Also producing trucks in large quantities. (For full details see Appendix). "Salmson" works produce low-powered aéro-engines.

Bois-Colombes

"Hispano-Suiza" repairs German planes and tests rebuilt or repaired engines (Dec. 1941); makes spare parts and new motors for planes (Feb. 1942). "Société Avions Amiot" working on Junkers (Nov. 1941); "Amiot" formerly assembled twin-engined medium bombers, now scheduled for production of Junkers aircraft (considerably damaged in 1930). "Goodrich" makes tires and V belts for the Germans. "Hispano-Suiza" factory equipped for a maximum monthly production of 300 aircraft engines.

Boulogne-sur-Seine

"Renault" plant at Billancourt reconditions French tanks for Germans (Aug. 1941) and makes aéro-engines (March 1, 1942). "Standard Electric Plant" is under contract to make radio sets for German tanks and aircraft.

Cachan

"Sécretan" makes telescopic gun sights and tank periscopes. These are produced by the thousands.

Chatillon

Contains factories (in enemy hands) capable of making artillery, anti-aircraft, anti-tank, naval guns and projectiles (also SAA). "Edgar Brandt" produces trucks using charcoal or other combustible (Nov. 1941). Germans ordered armor piercing hand grenades, 25 mm., explosive practice shell with tracers, and 25 mm. anti-aircraft shell. Trench mortar firm.

Chauny

Considerable production of acids here,

Clichy

"S.A.C.M." maintains machine tool plants. "Maison Avia Rex" manufactures parachutes for bombs and material (Nov. 1941). "S.N.C.A. du Sud-Est" - no complet aeroplane assembly affected here. "Société Alsacienne de Construction Mécanique" manufactures locomotives, boilers, stationary steam and gas engines, cables and textile machinery. "American Radiator Company" could readily be adapted for the production of fuses, bomb-caps, etc.; formerly produced brass valves, plumbing fixtures, etc.

La Corneuve

"S.A. Capra" family turned out finished aircraft with exception of aero-engines. "Rateau" makes anti-aircraft and anti-tank guns.

Courbevoie

"Gallus" makes telescopic gun sights and tank periscopes by the thousands according to reports (Jan. 3, 1942). "Société Avia" has German technicians and engineers working at full capacity on German planes. Bloch "S.N.C.A. du Sud-Est" has made spare parts.

St. Denis

"Delaunay-Belleville" makes ammunition. They have German orders for shells. Can produce small arms, ammunition, and bombs. Contains factories (in enemy hands) capable of producing artillery, anti-aircraft, anti-tank, and naval guns. Contains privately-owned powder plant (in enemy hands), also has considerable production of acids here. "Roche Alphonse" making tank towers and plane wings (Nov. 1941). 90% of cement manufacture was seized by the Germans. "Etab. A. Cazeneuve" makes sliding and screw cutting lathes. "Companie Générale de Construction" produces fuselages. "Manufacture d'Arms de Paris" produces sighting apparatus for guns. "Delaunay Bellevill (rue de l'Ermitage) has German orders for shells. Could also produce small arms, ammunition, and bombs. "Manufacture National d'Arms" produced tanks at rate of 30 per month, none since occupation.

Gennevilliers

"Société Gnome-Rhône" possibly one of the larges forges and foundries for aluminum, aluminum alloys, and aero-engines in Europe. "Compagnie Française d'Accumulateur Électrique" is an important firm of starter and radio accumulators.

Hautmont

Considerable production of acids here.

Issy-les-Moulineaux

"Société Française de Munitions d'Artillerie" produces shells. "Société Caudron-Renault" formerly specialized in construction of medium bombers. "Renault" makes 25 to 35 small planes per month for the Germans; also makes 5 ton trucks, spare parts for traction and tanks; making 2,000 trucks (May 1941) and small tanks of 20 tons (Aug. 1941). "Caudron-Renault" ordered to make 75 Caudron 445 airplanes per month.

Ivry-sur-Seine

"Panhard" making 55,000 wood gas generators for Germans (Feb. 1942) and manufacturing 100 three and one-half ton trucks and quantities of armored cars (May 1941). "Compagnie d'Applications Mécanique" has bearing plants here and produced 4/5 of French bearing output (also in Lyon). "Cie. Générale d' lectricité" makes accumulator containers. "Étab. H. Ernault" produces lathes, including heavy-duty and semi-automatic lathes, milling, reaming, and copying machines, gear-cutters, and milling-cutter grinders.

Levallois-Perret

"Hotchkiss" produces light 13 ton tank. "Manufacture Nationale de Levallois"(formerly Hotchkiss) makes dual purpose anti-tank and anti-aircraft Hotchkiss guns; also machine guns (in enemy hands). "Optique et Précision de Levallois" makes range finders. Large firm of "Société Française Radio Électrique" cooperating 100% with the Germans and producing radio equipment for German aviation industry. "Manufacture Nationale d'Armes" produces a 13 ton light tank. "Accumulateurs S.L.E.M." makes chiefly starter and radio accumulators. "Société du Carburateur Zenith" makes carburators. "Société Optique et Précision de Levallois" makes stereoscopic range-finders with fixed scale, sterepscopic range-finders for artillery, height finders.

Neuilly-sur-Seine

"Société Anonyme Solex" produces carburators.

St. Ouen

The "S.O.M.U.A." concern made a 20 ton high speed tank (20 per month reported) and lorries; also factories for machine tools. "Citroen" formerly produced empty shell and torpedo components before the war, now making gun parts again. "Bliss et Cie." makes presses. "Ateliers de Construction Lavalette" producing fuel injection equipment for Diesel German Army trucks, busses, and tanks, and submarines. Formerly produced starters, generators, magnetos, and spark plugs for commercial engines primarily. "Société pour le Travail Electrique des Metaux" manufactures chiefly starters and radio accumulators.

Pantin

"Aufiere" produces predictors for anti-aircraft guns. "Étab. P. Hure" makes universal milling machines.

Puteaux

State arsenal where tank turrets are made (taken over by Krupp for motor transport repairs). "Ateliers Mécaniques" repairing and supplementing material for new panzer division; also factories (in enemy hands) capable of making automotive vehicles and precision instruments. "Atelier Carpentier" making precision instruments.

Reuil

"Etab. Cuttat" repairing captured French guns, automatic rifles, and rifles.

Romainville

"Société des Accumulateurs Fixes et de Tractions" leading manufacturer of alkaline accumulators.

Sartrouville

"S.N.C.A. du Nord" produces flying-boats (largest factory in France). "Construction Aéronautique du Nord" constructing plane and metal parts for parachutes.

Sevran-Livry

Contains state powder plant (in enemy hands), formerly produced nitrocellulose powder, continues to produce 2,000 tons yearly of cordite.

Suresnes

"S.N.C.A. du Sud-Ouest" specialized in hydroplanes. "Bloch" assembling Junkers JU-52's (Feb. 1942); also factories (in enemy hands) capable of making vehicles of all kinds and tanks. Former "Talbot" company produced (supposedly) aero-engines. Tractors for tanks made at Mont-Valerin.

Toussus-le-Noble

"S.N.C.A. du Centre" formerly produced the Leo 45, but output not known. 300 JU 52's ordered by Germany.

Val d'Or (St. Cloud)

"Société Marcel Bloch" formerly manufactured spare parts, principally wings; possessed very fine workshop.

Velizy-Villacoublay

"S.N.C.A. du Nord" formerly assembled Breguet planes.

Villacoublay

"Bloch" Sud-Ouest (Est) formerly assembled planes of the Bloch type; at present largely doing repair work. Sud-Est "Lioré et Olivier" believed to have formerly made 100 twin-engined reconaissance bombers; now making aircraft components. Nord "Breguet", Velizy-Villacoublay formerly assembled the Breguet type of aircraft fighters, . "Morane" now building Fierel's German aircraft, but "Morane" formerly assembled the Morane 406 single-engined fighters.

Villiers-St. Paul

Contains largest dye plant in France and produces 70% of the dyes consumed.

Vincennes

Contains factories (in enemy hands) capable of making artillery, anti-aircraft, anti-tank, naval guns, and projectiles (also SAA).

Vitry-sur-Seine

"Manufacteur d'Isolantes et Objects Moules" makes submarine battery containers.

PAUILLES

Contains a powder plant.

PAUILLAC (Gironde Dept.)

"Société des Chantiers et Ateliers du Rhin" has naval workshops at Pauillac, makes replaceable parts. There is also a petroleum refinery here.

PECHELBRONN (Bas-Rhin Dept.)

"Pechelbronn" (Société d'exploitations minières). Petroleum.

PENTALLIER-sur-SAONE

Contains privately-owned powder plant (in enemy hands).

PÉRIGUEUX (Dordogne Dept.) See also Tulle.

"Ateliers G.S.P." maintains machine tool plants.

PIENNES (Meurthe-et-Moselle Dept.)

"Société des forges et aciéries du Nord et de l'Est". Iron ore mining

ST. PIERREMONT (Ardennes or Meurthe-et-Moselle Dept.)

Contains aluminum plants. "Société anonyme des Mines de Fer de St. Pierremont". Iron ore mining.

POISSY (Seine-et-Oise Dept.)

"Société Matford" one of the largest aéro-engine plants in France; destined to manufacture Rolls Royce Merlin engines. "Ford" factory makes vans and busses (bombarded by R.A.F.); making 60 trucks daily (Feb. 1942).

POITIERS (Vienne Dept.) See Chatellerault.

ST. PONS (Hérault Dept.)

Contains state powder plant.

PONGES-les-EAUX

"S.N.C.A. du Centre" formerly used for manufacture of spare parts.

PONT-de-BUIS (Finistère Dept.)

Contains state powder plant; formerly produced nitrocellulose powder.

PORT-de-BOUC (Bouches-du-Rhône Dept.)

"Chantiers de Provence" shipbuilders reported not to be very active. "Kuhlman" plant (new) produces sulphuric acid and super phosphates.

PORT JEROME (Seine-Inférieure Dept.)

"Standard" petroleum refinery. Storage tanks no longer serviceable.

PORT VENDRES (Pyrénées-Orientales)

"Société Nobel Française" now open; formerly produced small quantities of nitroglycerine and dynamite.

LA PRAZ (Savoie Dept.)

Contains aluminum plants.

SAINT PRIVAT (Moselle Dept.)

"Société des forges et aciéries du Nord". Iron ore mining.

PUTEAU (See Paris area)

PYRÉNÉES MTS.

"Beyrede" produces aluminim, estimated capacity for 1942 - 3,500 tons.

LA QUARTIOR-GAILLARD

"Société des mines de la Loire". Coal mining.

RAMBOUILLET (See Paris area)

ST. RAPHAEL (Fréjus) (Var Dept.)

Military aerodrome formerly maintained a small staff for testing and repair work.

RAISMES (Nord Dept.)

"Cie des Mines d'Angin". Coal mining.

RENNES (Ille-et-Vilaine Dept.)

Contains factories (in enemy hands) making automotive vehicles. Also contains privately-owned powder plant.

REUIL (See Paris area)

LE RIPAULT (Indre-et-Loire Dept.)

Contains state powder plant (in enemy hands) formerly producing 6,000 tons yearly of nitrocellulose.

LA RIVIÈRE (Gironde Dept.)

Contains powder plant formerly producing 1,500 to 2,000 tons of dynamite, amatol.

ROANNE (Loire Dept.) Near Vichy.

Contains a great state arsenal.

ROCHEFORT (Charente-Inférieure)

"S.N.C.A. du Sud-Ouest" specialized in the manufacture of Bloch machines and had complete facilities for assembling and constructing apart from aéro-engines.

LA ROCHELLE (Charente-Inférieure Dept.) See also Pont-de-Buis.

"Étab. Douzille" built for construction of spare parts. "S.N.C.A. du Sud-Ouest" installed in factory of "Wagons-Lits". Quantity or activity unknown.

ROCHELLE et CENDRAS (Gard Dept.)

"Société des houillières de Rochebelle". Coal mining.

LA ROCHE-sur-YON (Vendée Dept.)

"Société des Avions Couzinet" - not known if factory was ever completed for manufacture of aeroplane spare parts.

ROCHLING (Moselle Dept.)

"Société des aciéries de Longwy". Iron ore mining.

ROCHE-la-MOLIÈRE et FIRMINY (Loire Dept.)

"Cie. des mines de Roche-la-Molière et Firminy". Coal mining.

RODOLPHE (Haut-Rhin Dept.)

"Société de Mine Rodolphe". Salt mining.

ROMAINVILLE (See Paris area)

ROMANCHE, Valley of; Southeastern France

"Rioupcrioux" produces aluminum; estimated capacity for 1942 - 6,000 tons. "Les Clavaux et Venthan" aluminum production for 1942 estimated at 3,000 tons.

ROMBAS (Moselle Dept.) Near Metz.

Contains factories (in enemy hands) capable of making artillery, anti-aircraft, anti-tank, and naval guns. "Société lorraine des aciéries de Rombas". Iron ore mining.

ROMORANT/PRUNIERS (Loir-et-Cher ?)

"S.N.C.A. du Centre" formerly engaged in aviation assembly works.

RONCOURT (Moselle Dept.)

"Union des Consommateurs de Produits metallurgiques et industriels". Iron ore mining.

ROUBAIX (Nord Dept.)

"Kuhlman" plant produces mainly acids, including oleum.

ROUEN (Seine-Inférieure Dept.)

Contains privately-owned powder plant (in enemy hands). "Chantiers Normandie" building oil tankers for German Navy, cargo vessels for French, cargoes for Germans, refrigerated trawlers for French.

ROUTE DE MONTATAIRE, town of **Creil** (Oise Dept.)

"Société Brissonneau et Lotz" airplane construction and assembly plant.

ROYAN (Charente-Inférieure Dept.)

"Société Caudron" small assembly and repair factory on an airdrome.

RUELLE (Charente Dept.)

Contains factories producing projectiles and SAA.

SAINTES (Charente-Inférieure Dept.)

"Hispano-Suiza" produces guns and ammunition.

STRASBOURG (Bas-Rhin Dept.)

"Société Matford" now working on aéro-engines, formerly used for the forging, assembling, and testing of Matford motor engines.

SURESNES (See Paris area)

TALENCE (Gironde Dept.)

"Bordeaux Aéronautique" making spare parts for aircraft.

TARBES (Hautes-Pyrénées Dept.) See also Soues.

Large state arsenal here, produces shells, fuses, possibly anti-aircraft shells. Personnel: 5,000. 1,500 employed on gun parts, German controlled. State arsenal employing 1,500 workers making field-artillery pieces, airplanes and military cars for Germany. "Hispano Suiza" makes airplane engines (30 per week for Germans ?); reported to be making (Feb. 1941) Junkers heavy oil engines; also contains factories capable of making small arms, artillery, anti-aircraft, anti-tank, naval guns and projectiles (and SAA).

THIONVILLE (Moselle Dept.)

Contains great cast iron and steel factories.

TOULON (Var Dept.) See also Braqueville and Esquerdes.

Great activity reported in Toulon Naval Dockyards; there is a synthetic gasoline factory here.

TOULOUSE (Haute-Garonne Dept.)

"S.N.C.A. du Midi Dewoitine" making 20 or 30 planes per month (Sept. 1941). "Société Avions Latecoere" working on flying boats (Nov. 1941). Contains factories capable of making artillery, anti-tank, anti-aircraft, naval guns and projectiles; also SAA. Contains state powder plant as well as private one, formerly producing 56,000 tons of nitrocellulose, of which it contains very large stocks. "Cartoucherie de Toulouse" makes rifle and machine gun ammunition; repairs cars. Personnel: 1,500 (June 1941). "Société Aéronautique Française" made aeroplane spare parts. The "S.N.C.A." formerly made 150 planes a month, now about 25 per month. The French Air Ministry ordered 500 for 1942. "Poudrerie Nationale" is a large acid plant.

SALINDRES (Gard Dept.)

Factory produces alumina, estimated capacity for 1942 - 30,000 tons. Working for Germany.

SANNOIS, Fort de Montigny (Seine-et-Oise Dept.)

"Société Lorraine Dietrich" underground factory which was to test aéro-engines.

SANCY

"Société des hauts fourneaux de Saulnes". Iron ore mining.

SARRE-et-MOSELLE (Moselle Dept.)

"Société houillière de Sarre-et-Moselle". Coal mining.

SARTROUVILLE (Seine-et-Oise Dept.) See Paris area.

SATORY (Seine-et-Oise Dept.)

Army A.F.V. Depot carrying out repairs on French tanks (German tanks?)

SAVOY, Dept of

"Société d'Électro-Chimie et d'Électro-Metallurgie et des Aciéries Électriques d'Ugine" has made armor plate, gun barrels, and armor piercing shells.

SÈTE (Hérault Dept.)

"Société Bordelaise de Produits Chimques", Étang de Thau, specializing in production of high explosives and powder for Germans (Oct. 1941).

SEVRAN-LIVRY (Seine-et-Oise Dept.) See Paris area.

LA SEYNE (Basses-Alpes)

"Forges et Chantiers de la Mediterranée" produced a 13 ton light tank.

SORGUES (Vaucluse Dept.)

Factories manufacturing phenolate for Germany (Oct. 1941). Contains a state powder plant.

SOUES, near Tarbes.

"Hispano Suiza" can produce 200 aéro-engines per month.

SOUMONT (Calvados Dept.)

"Société des mines de Soumont". Iron ore mining.

STOMER (See La Pallice)

TOUSSUS-le-NOBLE (See Paris area)

TOURS (Indre-et-Loire Dept.) See Le Ripault.

LE TRAIT (Seine-Inférieure Dept.)

"Chantiers de la Seine Maritime" (Worms et Cie.) building tankers for French and Germans, submarines for Germans, cargo boats for French, transports and water-barges for German Navy.

TUCQUEGNIEUX-BETTAINVILLERS (Meurthe-et-Moselle Dept.)

"Société des Aciéries de Longwy". Iron ore mining.

TULLE, southwest of Toulouse (Haute-Garonne Dept.)

Contains a large state arsenal.

VAL d'OR (St. Cloud) See Paris area.

VALENCE (Drôme Dept.)

Contains factories producing projectiles; also the Valence cartridge factory being dismantled and transported to Germany.

VANGES

Contains powder plant formerly producing 3,000 tons of Amatol yearly.

VELIZY-VILLACOUBLAY (Seine-et-Oise Dept.) See Paris area.

VENISSIEUX (Rhône Dept.)

"S.O.M.U.A." has machine tool plants, also produces ammunition, bombs, and gun carriages. Probable output of tanks: 50 per month. Also produces troop transports. "Arsenale de la Mouche" fills anti-aircraft shells and cartridge cases. Personnel: 2,500 (April 1942.)

VERNON (Eure Dept.)

Contains factories (in enemy hands) making automotive vehicles.

VIERZON (Cher Dept.)

"Estampage de la Vence" makes ammunition . "Ateliers de la Vence" have German orders for 75 mm. shells.

VIEUX-CONDÉ (Nord Dept.)

"Cie. des Mines d'Anzin". Coal mining.

VILLACOUBLAY (See Paris area)

VILLEFRANCHE-sur-SAÔNE (Rhône Dept.)

"Bonnet Ainé et ses Fils" produces 75 mm. shells, bombs up to 500 kg. Personnel: 1,500 in May 1941, (rue Nationale). "Vermorel and Company" manufacture flame throwers; shells for 75 mm. guns and 25 mm. anti-tank guns; tripods, leaning and elevating mechanisms for machine-guns; tank parts. Personnel: 2,000 in May 1941.

VILLEUR-BANNE (Rhône Dept.)

"Étab. Gendron Frères" specializes in autogenous welding and cutting apparatus which makes gas-producers, ventilators, forges, etc.

VILLIEN-SAINT PAUL (See Paris area)

VILLEVEYRAC (Hérault Dept.)

One of the three principal centers of bauxite mining is nearby.

VINCENNES (See Paris area)

VITROLLES (Hautes-Alpes Dept.)

"S.N.C.A. du Sud-Est" assembles and tests very large hydroplanes.

VITRY-sur-SEINE (See Paris area)

VONGES (Côte d'Or Dept.)

Contains state powder plant (in enemy hands)

1470

VIEUX-CONDÉ (Nord Dept.)

"Cie. des Mines d'Anzin". Coal mining.

VILLACOUBLAY (See Paris area)

VILLEFRANCHE-sur-SAÔNE (Rhône Dept.)

"Bonnet Ainé et ses Fils" produces 75 mm. shells, bombs up to 500 kg. Personnel: 1,500 in May 1941, (rue Nationale). "Vermorel and Company" manufacture flame throwers; shells for 75 mm. guns and 25 mm. anti-tank guns; tripods, leaning and elevating mechanisms for machine-guns; tank parts. Personnel: 2,000 in May 1941.

VILLEUR-BANNE (Rhône Dept.)

"Étab. Gendron Frères" specializes in autogenous welding and cutting apparatus which makes gas-producers, ventilators, forges, etc.

VILLIEN-SAINT PAUL (See Paris area)

VILLEVEYRAC (Hérault Dept.)

One of the three principal centers of bauxite mining is nearby.

VINCENNES (See Paris area)

VITROLLES (Hautes-Alpes Dept.)

"S.N.C.A. du Sud-Est" assembles and tests very large hydroplanes.

VITRY-sur-SEINE (See Paris area)

VONGES (Côte d'Or Dept.)

Contains state powder plant (in enemy hands)

b. Type and Size of Industries of a Military Nature

(1) Introductory

The German Army occupies 117,537 square miles or 55% of French territory, and has subjected 28,092,000 or 67% of the French population to German rule. Simultaneously there have also come under the control of Germany the great industrial regions of Paris, Lille, and the important metallurgical centers of Longwy, Briey with the eastern departments of the so-called forbidden zone, Included in the remaining 45% of French territory left to the Vichy government are the manufacturing centers of Lyon and Saint Étienne and the important aluminum industry near Grenoble.

France possesses important metallurgical, motor vehicle, chemical, textile and optical industries as well as large storage and oil refineries together with facilities for ship-building on a large scale. However, the country is not as highly industrialized as the United States, Great Britain, and Germany.

At the present (June 1942), over 70% of the magnesium, almost 90% of the aluminum, 80% of the iron and steel, 90% of the turpentine, and 75% of all resinous products produced in France are reported to be taken directly, or indirectly, by Germany. At the same time, French production of iron ore, pig iron, and steel represent respectively 57%, 14%, and 12% of total production in German-dominated Europe. As for aluminum, France produces about 36% of the total supply of the German war industry, both in the form of metal and in the form of bauxite and alumina. Although France has been hard pressed for wool and leather materials, she is supplying Germany with a very large percentage of the present production.

It is reported that, on the whole, the industria plant in France survived the brief 1940 campaign without great damage, but since then the motor vehicle and shipbuilding industries have suffer to an undetermined extent from the RAF raids over France. It is also reported, that considerable proportions of the great French munitions industry have been producing on a large scale for Germany, and that, in particular, French plants are turning out and repairing motor trucks, tanks, aircraft, merchant ships, etc.

(2) Industries

(a) Aluminum

There are fourteen aluminum plants in Franc most of which are located in Savoy to the southeast of Lyon where there i considerable hydro-electric power available. There are also two plants in the Pyrénées near the Spanish border, 25-50 miles west of Tarascon. The 1939 production of aluminum was 50,000 tons, but the 1942 estimate is placed at 70,000. The output of bauxite and alumina, however, is authoritatively considered to be equivalent to 105,000 tons of aluminum which gives a total output of 175,000 tons, or 36% of European productio and 125% of the French 1938 production level. This leaves, according to a Nov. 1941 estimate, about 25% for French requirements.

(b) Magnesium

Most of the metallic magnesium in France is manufactured by two firms located in the southern part of the country, one in the Basses Alpes, and the other in Isère. Smaller quantities are produced at Villard in Haute-Savoie. The 1939 output was 2,500 tons, while the present rate of production is estimated at 3,000 tons.

(c) Automotive Industry

On December 31, 1939 there were reported to be 2,258,500 motor vehicles in France. These were to be classified approximately as follows:

Passenger cars (including taxis)......	1,737,000
Government cars......................	8,000
Busses................................	40,000
Trucks................................	455,000
Diesel units..........................	18,500

Because of the fact that only about 100,000 of the former number of cars are now employed, it has been estimated that 1,300,000 can be regarded as lost and about 200,000 temporarily out of use. A very recent report (June 11, 1942) indicates that the number of passenger vehicle licenses has been reduced from 10,000 in December 1941 to 5,000 at present (June) with an anticipated reduction to 2,000.

The 1938 production of cars and trucks amounted to 189,691 and 25,258 respectively, although the total capacity of the industry was probably greater since domestic car and truck manufacture is reported to have been declining for years. Production of motor vehicles is concentrated in the Paris area, which is the center of the Seine Department, with the exception of certain gasoline and Diesel vehicles manufactured at Lyon. The manufacture of bodies, trailers, part and accessories has been somewhat more widely distributed, extending to the Lille area in northern France (Nord and Pas-de-Calais), the Rhône River région (Lyon, St. Étienne and Marseille), and to Clermont-Ferrand in central France, where Michelin tires were produced.

The Germans have now taken over complete control of the industry and have adopted a three-point program:

(1) repair work on vehicles of all types;
(2) utilization of all raw materials and parts found in the French plants;
(3) manufacture limited to vehicles (almost entirely trucks) required for their own use with a high degree of type standardization.

Following upon this plan, French manufacturers of new vehicles, who turne out 150,000 trucks for the Nazis since June 1940, are concentrated in the seven firms of Matford, Renault, Citroen, Peugeot, Saurer, Berliet, and Rochet-Schneider, with the entire output for the first quarter of 1942 going to the Germans.

The Renault, Matford, Peugeot, and Citroen works are located at Paris, and the other three are at Lyon. In fact, in the motor vehicle industry is found one of France's three or four most important contributions to Germany. The remainder of the French pre-war capacity is being utilized for the manufacture of parts and repair work or for the manufacture of tanks and tank parts.

The table below gives the projected output for the first quarter of 1942. However, this production depends upon the delivery of raw materials - deliveries which have become more and more difficult.

Manufacturer	Number of Trucks	Load Capacity (tons)
Renault) Citroen) Peugeot)	3,200	2
Matford	3,000	3
Renault) Citroen)	2,900	3.5
Berliet) Saurer) R.-Schneider)	870	4.5
Renault	100	5
Total	10,070	

(d) Armament Industry

(1) Tanks

Regarding the pre-armistice production of tanks there is adequate and reliable information. About 400 of the heavy, 32-ton tanks known as "Char B" were in service in May of 1940. Two hundred tanks per month was the goal decided upon, but actually the production figure was around 40 per month.

These "B" tanks were assembled at -

(a) Satory, which produced two-thirds of the entire output,

(b) Le Creusot (Schneider),

(c) Billancourt (Renault).

The engines were made by Renault in Paris, and the tanks were made at Mont Valerin. The armour plate was made at the works of the Forges et Aciéries de la Marine et de Homécourt at St. Chamond. Turrets come from the state arsenal at Puteaux.

A thirteen-ton light tank was produced at the following places:

(a) In Paris by Renault,

(b) In the Paris area at Levallois-Perret by Hotchkiss,

(c) At La Seyne by the Forges et Chantiers de la Méditerranée.

The combined output of these groups was approximately 100 per month. Also the S.O.M.U.A. concern at St. Ouen made a 20-ton high speed tank with an output of about 20 per month.

Regarding the general situation of these companies, within the scope of the economic collaboration schemes with Germany, it is reported that the Hotchkiss Company has been amalgamated with the firm of Saurer, Latil, Unic, Delahaye, Laffly, and La Licome to form the Société Générale Française de la Construction Automobile. It is considered that the unification of this group of companies has as its object the placing of the execution of all German motor vehicles orders under direct Krupp control. As for present production, Renault, S.O.U.M.A., Hotchkiss, and the Société Générale d'Automobiles Américains of Paris are known to be making tanks or tank parts while most of the firms listed above as pre-armistice tank manufactures (at least those in the occupied zone) plus many former automobile and truck works, are now engaged either in the manufacture of tank parts or in repair work, or both. On March 27, 1942, it was reported that the total French tank output was (before the R.A.F. raid on the Renault plant) 150 per month, two-thirds of which was produced by Renault.

(2) Ordnance

The French armament (ordnance) industry may be divided into two general categories; there are the State-owned arsenals and the private manufacturers. There are believed to be about sixteen of the state arsenals, practically all of which are in the unoccupied zone, (one is the arsenal at Paris-Puteaux, which is known to be working for the Germans). By far the most important of these state arsenals are the three located at Roanne (near Vichy), at Tulle (east of Périgueux), and at Tarbes (southeast of Toulouse). With the possible exception of Roanne, these are not believed to be in operation at present and this is probably true of the other State arsenals in the unoccupied zone.

The privately owned arms plants are concentrated in four well-defined areas. Three of these regions, and a part of the fourth, are in the occupied zone:

(a) the Paris area,
(b) the region around Nancy (Meurthe-et-Moselle),
(c) the section of the Department of the Nord centering in Maubeuge and Valenciennes,
(d) a triangle slightly southeast of the center of France formed by Le Creusot, Montluçon, and St. Étienne, the last two being in the unoccupied zone.

The first area specializes in tanks and other motor vehicles, the second in raw materials for arms manufacture, while the production of the last two areas is more general in nature.

Over-all figures on pre-armistice French arms capacity are not obtainable, but owing to the fact that France maintained and equipped one of the largest armies in Europe as well as exporting significant quantities of weapons, it may be assumed that it was tremendous. The plant at Le Creusot (Schneider et Cie) alone was one of the most important in Europe. Because of the current lack of raw materials, however, it may be generally assumed that present production is far short of capacity.

Since the Germans were in a position to organize the distribution of their orders in the occupied zone shortly after their arrival, the production of certain types of armaments was well under way in that part of France by the beginning of 1941; in the case of the unoccupied zone it was apparently delayed into the second half of the year. At first the German orders for artillery appeared to be generally for French types with only a few for German types. Although the orders at first were not great, recently Germany is reported to be anxious to obtain from France finished weapons of all kinds, including those of the largest calibre even though production is still concentrate on anti-aircraft and anti-tank guns as well as automatic small arms. It can be safely assumed that the French armament industry of the occupied zone, having been under German control for almost two years, is by now well-integrated into the German production scheme.

Some of the more important manufacturers with their present production (where known) are as follows:

(a) Schneider et Cie., Le Creusot: has a German contract for 20,000 "series" of rough-machined gun barrels, jackets, breech blocks and screws of unknown calibre and type; a contract for 7,544 gun barrels; an order for Finnish account for 40,000 fuses; large contracts for heavy castings and forgings for German engineering, machine tool, and locomotive industries, including bars and sheets of special steels largely for the chemical industry and heavy components for hydraulic presses. This plant is also reported engaged to a small extent o tank production.

(b) Manufacture Nationale d'Armes at Chatellerault: formerly made the standard French service rifle; also machine guns for aircraft.

(c) Jacob Holtzer (near St. Étienne): field guns.

(d) Rateau at La Corneuve (near Paris) anti-aircraft and anti-tank guns.

(e) Manufacture d'Armes, St. Étienne: anti-aircraft and anti-tank guns. Machine guns and cartridges.

(f) Manufacture Nationale de Levallois (formerly Hotchkiss) near Paris: making dual purpose anti-tank and anti-aircraft Hotchkiss guns; also machine guns.

(g) Alsthom of Belfort and Estampage de la Vena at Vierzon are making ammunition (both in occupied zone).

(h) Delaunay-Belleville, St. Denis (Paris): artillery components.

(e) Aircraft Industry

During 1937 and 1938 it was decided to decentralize and enlarge the French aircraft industry, but it was doomed to failure as by 1940 no great increase had been accomplished. By April of 1940 the monthly output had reached 365 complete planes which included 145 fighters and 87 bombers. It is reported that most of the plants survived the invasion of 1940 with little damage, and about a year ago (June, 1941) an agreement was reached between Germany and France looking toward a large increase in French plane production. One report indicates that the goal of production is around 1,000 planes per month of which 80% or more are for the Germans. Of this number 600 per month are reliably reported to be allotted as follows:

Aircraft	To be built at
350 Dewoitine 520	Toulouse
100 Liore et Olivier	Amberieu
75 Caudron 445	Issy-les-Moulineaux
6 Brequet 730	Toulouse (?)
30 Latecoere 298	Toulouse (?)
20 Loire-Nieuport	?

It is also reported that in July, 1941, some half dozen of the principal airplane firms, controlling 14 factories in the occupied zone, received orders for about 2,060 aircraft of German types. Of this number 1,850 have been ordered, according to this report, for delivery between October, 1941, and March, 1943, with the remaining 210 ready for delivery between the latter date and July, 1944, or on an average of about 107 monthly. About 3/5 of this number are claimed to be of reconnaissance types with the remaining 2/5 being troop transports and Junker planes. However, airplane production at the end of 1941 was reported to be well under 200 a month, while a capacity of 400 per month is reported for normal times.

There follows a list of the principal French aircraft plants with information, where known, concerning their present activity;

(a) Paris area

S.N.C.A. du Nord, Sartrouville.

Largest flying-boat factory in France. Still in operation, but no indication as to amount of output.

Amiot, Colombes. This factory was the main assembly plant for the Amiottwin-engined medium bombers. Factory considerably damaged in 1940. Is reliably reported to be scheduled for production of Junkers aircraft, but no output figures available.

The Villacoublay Group.

1. Sud-Ouest (Bloch). This plant formerly assembled planes of the Bloch types. Is at present largely doing repair work. It is reported to have received an order for the assembling of 500 JU. 52 three-engined transports.

2. Sud-Est (Liore et Olivie This factory is believed to have completed, between January and June,194 100 LEO.45 twin-engined reconnaissance bombers. At present reported to be making aircraft components rather than complete planes.

3. Nord (Bréguet), Velizy-Villacoublay. Prior to the Armistice this plant was engaged in the assembly of the Bréguet type of aircraft. No information on present activities.

4. Morane. Comparatively small factory previously engaged in assembling the Morane 406 single-engined fighter. Now building Fieseler aircraft for Germans; output not known.

Caudron-Renault, Billancourt. Prior to the Armistice this factory produced Caudron fighters and Goelan twin-engined aircraft. In 1940 production was changed to medium bombers and it is reported that they are still making a transport type plane which is probably the Goeland. Three hundred of these are stated to be on order, but present output is believed to be about 25 per month. In addition to this it is reported that the Issy-les-Moulineaux plant of Caudron-Renault has received orders from Germany to turn out 75 Caudron 445's per month.

S.N.C.A. du Centre, Toussus-le-Noble. Before the Armistice this plant produced the LEO.45, but output is not known. Orders have been received for 300 JU.52's, but it is doubtful whether large-scale production has yet begun.

(b) Northern Part of Occupied Zone (other than Paris)

S.N.C.A. du Nord, Meulte. In May 1940 this factory was making the Potez 63-11 twin-engined general purpose aircraft. Production was stated to be 90 per month, but this figure is believed to be too high. Personnel was 6,000. Following the Armistice, activity was limited to repair work on German aircraft. No definite information as to present activity.

S.N.C.A. du Nord, Les Mureaux. Produced aircraft of Les Mureaux type, including seaplanes and probably also the Potez 63. Capacity was about 60 per month. This figure may also be too high. Present information suggests ME.109's are being assembled and probably repair work in addition.

Amiot, Cherbourg. Formerly produce the Amiot 351 twin-engined bomber. Considerably damaged during invasion No information concerning present activities.

(c) Western Part of Occupied Zone.

S.N.C.A. de l'Ouest, St. Nazaire. This factory specialized in sea planes and also carried out the final assembly of imported American Curtiss and Glen-Martin machines. This plant now reported to be producing German float planes of the Arado type, calling for deliveries of 60 per month, which is believed to be a figure beyond its capacity.

S.N.C.A. de l'Ouest, Nantes-Châtea Bougon. During 1938-39 this plant produced 968 Morane 405 single-engined fighters. The plant was then transformed for production of the LEO.45 twin-engined bomber, but output of this type apparently never exceeded five per month. Factory is now divided into two parts, the first reported to be repairing HE.111 bombers; the other portion of the factory producing airframe components for the same type. For the latter section of the plant, the maximum figure of 60 per month is the productio figure aimed at.

S.N.C.A. du Sud-Ouest, Bordeaux-Merignac. Produced planes of the Bloch type, including single-engined fighters and twin-engined bomber reconnaissance type. Reported to be still producing the same type of aircraft for the Germans, in addition to which, some work is being done on the German Focke-Wulf type. Output about 30 or 40 per month.

(d) Other Occupied Zone.

S.N.C.A. du Sud-Est, Maringnane. In June, 1940 this factory was producing LEO,45's but output was small. No reliable information on present activities.

S.N.C.A. du Midi, Toulouse. In 1940 this plant was producing Dewoitine 520 single-engined fighters. Various reports at present indicate some activity, and whatever production may be taking place is believed to be for French rather than German account; present output is believed to be about 25 per month (maximum pre-Armistice capacity is reported to have been 150 per month). However, the projected program mentioned above allots 350 of Dewoitine 520's to the factory per month, which is believed to be considerably beyond the capacity of this plant. A separate report states that the French Air Ministry has ordered 500 for delivery in 1942.

S.N.C.A. du Sud-Est, Ambérieu. This was the largest of the various Sud-Est plants and was designed for large-scale bomber production. No information on current activity is available except that given in the projected program mentioned above, and a report that the French Air Ministry has ordered 400 Liore 45's for delivery during 1942, to be manufactured at this plant and at Marignane.

S.N.C.A. du Sud-Ouest, Châteaurou

This is also a large plant which formerly produced the Bloch 131 bomber and the Bloch 151 and 152 fighters. Output was supposedly 2 per day.

No information concerning present activity except report that French Air Ministry has ordered 200 Bloch 175's for delivery during 1942. (See Appendix for statistics of recent date)

(f) Machine Tool Industry

In 1939 the French machine tool industry could only meet about 20% of the national requirements. The industry itself employed about 7,000 to 9,000 men of which 80% were skilled worker The greater part of the remaining 80% of the domestic requirements had to be met by imports, of which the major part came from the United State The industry is concentrated in northern France and in Alsace-Lorraine and to a lesser degree in the Rhine district. In unoccupied France production was chiefly concentrated on tools required for the manufacture of agricultural machinery.

The main products of the industry were standard tools of medium quality, although several firms made small tools of high quality. The only specialized products of the French industry were boring machines of exceptional size and weight manufactured by Etab. Charles Berthiez of Fives-Lille, which were particularly suitable for boring large gun-mountings. The most important concern was the S.O.M.U.A with plants at St. Ouen, Mouzeron, and Venissieux. Other important firms were S.A.C.M., with plants at Mulhouse, Bischwiler, Grafenstaden; Gingholz in Alsace-Lorraine, and Vichy; and Ateliers G.S.P., with plants at Paris, Albert, Périgeux, and Amiens. In view of the fact that the industry is almost entirely in occupied France, it can be assumed that it is under virtual German control.

The French bearing industry was of considerable size, its production amounting to about 50,000 bearings per day. The most important firm was the Compagnie d'Applications Mécaniques with plants at Ivry-Port and Lyon, which produced about 4/5 of the entire output. The Société Anon. Française had its factories at Asnières and Bordeaux and was the only producer of tapered roller bearings in France.

The French optical instruments industry, concentrated almost entirely in the Paris area, was of considerable importance; and reports indicate that it is now busy on orders for German account. The S.A.C.E.M., manufacturers of precision tools, is working exclusively for the authorities of occupation; and it is claimed that orders already total 400 million francs, principally for military optical equipment. Range finders are being obtained from Optique et Précision de Levallois; telescopic gun-sights and tank periscopes from Secretan at Cachan, Gallus at Courbevoie and Manufacture Nationale d'Armes at Châtellerault; light finders from Optique et Mécanique de Haute Précision (Paris); and A.A. fire control apparatus from Précision Modernes of Rue St. Charles, Paris.

The French radio manufacturing industry is almost wholly located in the Paris area. The three principal producers are Societé Française Radio Électrique (SFR), Société Industriel de Téléphone (SIT), and Société Indépendent de Téléphone sans Fil (SIF). SFR, the largest, is reported to be cooperating practically 100% with the Germans, and is producing radio equipment for the German aviation industry. Its principal plants are at Levallois (near Paris) and at Cholet (near Nantes). The plant at Levallois alone employs about 6,000. SIF, located at 168 Rue Montrouge, Paris, employs about 2,000 and is making transmitters and tubes for military purposes. SIT, at 4 Rue des Entrepreneurs, is reported to be far from busy because of lack of raw materials. The other two manufacturers of any importance, Le Matériel Téléphonique and Companie Générale de Construction Téléphonique (both in Paris) report large German orders on hand, which, however, are being filled only very slowly because of lack of raw materials, and the "slow down" tactics of the management and workers.

(g) Iron and Steel Industry

French metallurgy is distributed in three principal districts: the eastern, the northern, and the center.

The eastern district comprises the basin of the Department of Meurthe-et-Moselle, including Longwy, Briey, Nancy, and Thionville. In 1930 this district yielded 4,300,000 tons of cast iron (41% of total French production) and 3,600,000 tons of steel (38.3% of the national production). During the same year Alsace-Lorraine yielded 3,600,000 tons of cast iron (35.4% of the national production) and 2,900,000 tons of steel (31.2% of the total), with the entire eastern district yielding 78.3% of cast iron production, and 69.5% of French steel. These steel works produce the Thomas steel which is made into rails, beams, partly finished pieces, etc.

The secondary regions of the eastern district are

(1) the Haute-Marne Department, with its branches of the Merrine-et-Moselle factories;

(2) the Ardennes, with its special production of bolts, nails, and hardware.

The northern district, which includes the Nord and Pas-de-Calais departments as well as regions around Paris, produced 1,300,000 tons of cast-iron in 1930 (11.7% of the total production and 1,700,000 tons of steel - 16.9% of the total).

The central district includes the department of the Loire, Allier, Rhone, Nièvre, and Saône-et-Loire. This region is reported to specialize in the production of special steels such as artillery, naval construction, and public works.

Recent reports (spring of 1942) indicate that declining receipts of coke, especially in the Longwy and Nancy districts have brought about a reduction in French iron and steel output. Apart from Lorraine and the German-operated blast furnaces in a portion of Meurthe-et-Moselle, where operations are said to be approaching full capacity, it is reported that French pig-iron output fell from just under 30% of normal in the early summer of 1941 to 20% of normal by autumn, or at the rate of 1½ million to 1 million tons a year. As French pig-iron and steel productionsare generally more or less equal, there has probably been a similar decline in the steel figures. At the same time, it is reported that 15 blast furnaces were operating in Nancy and Longwy centers in the summer of 1941 and 16 out of the 66 blast furnaces near the northern and Alsatian frontiers of France.

(h) Locomotive Building

Most of the firms engaged in the construction of railway material are situated in occupied France. The largest French company devoted almost entirely to railway material in the Société Alsacienne de Construction Mécanique with large works at Grafenstaden (near Strasbourg), Mulhouse, and Belfort. These works had an annual capacity of about 120 engines of all types and gauges. The Schneider plants produce engines at Le Creusot for the French railways and in past years have produced for Spain, Italy, and Russia. The Companie de Batignolles-Chatillon of Paris and Nantes, the Companie de Fives-Lille at Lille, with one large subsidiary at Givors near Lyon, the Companie des Forges et Aciéries de La Marine et d'Homécourt, with works at Saint-Chamond, the Companie Française de Construction Mécanique at Denain, and Ateliers de Construction du Nord, at Blanc Misseron and Cail, all produce locomotives. They all lie within the area occupied by Germany with the exception of the Forges et Aciéries de la Marine.

The following is a list of locomotives reported to have been ordered for German account:

(1) 245 "Decaped" type tender locomotives

Batignolles-Chatillon	80
Cail	60
Fives-Lille	55
Schneider	50

(2) 40 "Decaped" P type tender locomotives for heavy traffic.

Atelier de Construction Nord-France	30
Aciéries du Nord	10

(3) "Mikado" type tender locomotives

Atelier de Construction Nord-France	30
Franco-Belge	30
Schneiders	23
Marine Homécourt	50

(i) Shipbuilding Industry

In 1931 there were 18 French shipyards with nearly 90 slipways, and there is reason to believe that there has not been any great increase in recent years. Merchant marine construction alone for the years 1926-30 averaged 36,000 tons per annum, with a reported capacity of 500,000 tons per year. There are also reported to exist 10 more yards of less importance, where units of medium and small tonnages are built. There are also a quantity of small yards, about 20 of which are equipped to build boats of over 200 tons average.

Shipbuilding in France was reported to be almost at a standstill in the latter half of 1940. However, since the German occupation, the output of merchant ships is estimated to exceed the very low output achieved by French industry in pre-war years. St. Nazaire and the Nantes yards, where the greatest activity is apparent, now employ many thousands on shipbuilding and dockyard work. At Toulon continued activity is reported; and there have been appeals for skilled labor for naval construction work.

The meager information available concerning the yards of the unoccupied zone indicates that present activity is not great. Two destroyers are believed to be under construction, as well as some merchant vessels, including an 11,000-ton combined cargo and passenger boat.

Finally it should be pointed out that considerable repair work on both ships and submarines is being carried on, as is also large scale construction of E-boats, other motor boats, barges, etc.

The following are the principal shipyards in occupied France with information concerning their present activity: (See Appendix for a detailed list of the principal shipyards in occupied France with information concerning their present activity (spring of 1942).

(1) Dunkerque

Ateliers et Chantiers de France. Four tankers; 2 for French, 2 for Germans; all scheduled for launching during 1942, except one.

(2) Le Havre

(a) Chantiers Aug. Normand. 8 trawlers, 4 for Germans, 4 for French; 6 scheduled for launching during 1942. 4 submarines under construction.

(b) Forges et Chantiers de la Méditerranée. Two 3,500-ton colliers for the French; 5 "patrol vessels" for German Navy to be launched during 1941-1942; two 2000-ton channel boats one each for Germans and French to be launched 1941-1942.

(3) Le Trait

Chantiers de la Seine Maritime, (Worms et Cie). 3 tankers, 2 French, 1 German, to be launched 1942-1943; 2 submarines for Germans (1942); two 9,000-ton cargo boats for French to be launched 1943-1944; three 1,000-ton transports and 4 water barges for German Navy (1942-1943). 4 submarines were reported under construction 3/15/41.

(4) Cherbourg
Government Arsenal.

It is reported 3/15/41 two submarines under construction.

(5) Rouen

Chantiers Normandie. Six 2,500-ton oil tankers for German Navy, launchings 1941-42; two 2,650-ton cargo vessels for French; two 8,500-ton cargo vessels for Germans, to be launch 1943-1944; 4 cargo vessels for French of 7,500, 7,300, and 2,500 tons and one with tonnage not specified; two 1,200-ton refrigerated trawlers for French.

(6) Brest

Naval dockyards. No information.

(7) Caen-Blainville

Chantiers de France. Ten 50-ton oil barges for German Navy, all scheduled for launching in 1942; two 3,500-ton colliers for French; two ships, type not known, for French.

(8) Lorient

Naval Dockyard. No information.

(9) Bordeaux

Chantiers de la Gironde. Two 9,000-ton cargo vessels for French; two destroyers, one French, one German, (launching 1941); 8 tugs for German Navy (1942); onesloop for French.

(10) Nantes

(a) Chantiers Dubigeon. Twelve water barges for German Navy (1942); 3 trawlers, 2 of which for French; 1 submarine for German Navy, to be launched 1942. 6/10/41 it is reported two submarines, one tug, and one trawler under construction.

(b) Chantiers de Bretagne. 5 trawlers for German Navy, all for launching in 1941; 6 tugs for German Navy (1942) two 3,500-ton colliers, one German, one French; one destroyer for German Navy (1941). 6/10/41 it is reported that 3 torpedo boats and two 3,500 ton cargo ships under construction.

(c) Chantiers de la Loire. 10 tugs and 2 lighters for German Navy; one destroyer (launching 1941) and 3 trawlers for German Navy; two 3,500-ton colliers for French. It is report that 4 torpedo boats and one trawler under construction, 6/10/41.

(11) St. Nazaire

(a) Chantiers de la Loire. For Germans one 9,000-ton refrigerated cargo ship, four 9,000-ton and four 11,000-ton cargo vessels, all for launching 1942-1942. For French two 11,000-ton cargo vessels and one 3,500-ton collier; also two aircraft tenders (1942). 6/10/41 it is reported the following are under constructi aircraft supply vessels, two tankers of 15,000 and 11,000 tons, 2 torpedo sloops of about 250 ft., and 11 floating docks.

(b) Chantiers de St. Nazaire (Penhoet) An aircraft carrier, the Joffre, for German Navy, scheduled to be launche Feb. 1942; also for German Navy two 9,000-ton and one 7,300-ton cargo vessels; for German Merchant Marine one 7,300-ton, two 9,000-ton, and six 11,000-ton cargo vessels; for French one 21,000-ton oil tanker. Two aircraft supply vessels and 4 patrol boats under construction, 6/10/41.

(j) Chemical Industry

The French chemical industry is the fourth largest in the world. The normal output, however, is only about 20% of that of the United States and 40% that of Germany. The three most important producers are the Etablissments Kuhlman, Saint Gobain, and and Alais, Froges, and Camargue. The smaller companies include Bozel Maletra, Air Liquide, Électrochimie et Électrometallurgie d'Ugine, and Produits Azotes.

The French chemical production is widely dispersed, but Paris, Lille, Lyon, and Marseille are the chief centers. The electro-chemical and electro-metallurgical industries are located in southern France, in the vicinity of the sources of hydro-electric power in the Alps and Pyrenées. The perfume industry is primarily at Grasse near Nice; and soaps and toilet articles are manufactured around Paris as well as in several other districts. In the Lille-Roubaix area in northern France, there is a considerable output of heavy chemicals, acids, salts, fertilizers, dye intermediates, etc. There is considerable production of acids around Lyon, at Saint Denis in the Paris vicinity, and at Chauny and Hautmont, northeast of Paris. The production of soda ash, of which France is a large producer, is centered at Nancy, where there are salt deposits in considerable quantity.

France produces synthetic ammonia and calcium carbide in large quantities, although the production is reported to be scattered among many small units. With control over large deposits of phosphate rock in North Africa, France is the second largest world producer of super-phosphates and also a high-ranking producer of dyestuffs. The largest dye-plant, which is reported to produce perhaps 70% of the dyes consumed in France, is situated at Villers-Saint Paul, about 2½ miles north of Paris. Another large dye plant is situated north of the small town of Oissel on the main railway line from Paris to Le Havre.

In September, 1941, chemical production was estimated as being 35% of the 1938 level of production, but in the occupied zone activity increased in plants manufacturing nitrogenous products. Retailer demands for pharmaceuticals to replenish stocks stimulated production to some extent, but the output has been restricted by a shortage of necessary materials.

Under present conditions the production of nitrates, super-phosphates, and calcium carbide appear to have fallen off considerably owing to shortages of power, fuel, and raw materials, and the output of many other products has also declined. Part of the industry is working for German account, and in the future there will probably be more and more collaboration. The soda ash plants near Nancy are reported to be operating almost entirely for the Germans. In Nov. 1941, the establishment of the Société Anonyme de Matière Colorante et Produits Chimique, commonly known as Francolor, by the German I.G. Farbenindustrie and the French Kuhlman combine was widely commented upon by the German economic press. Collaboration with German concerns by the Kuhlman company will permit production to reach 60% of pre-war levels, it is hoped. No new plants were scheduled for early production by the Francolor, whose present factories are those formerly owned outright by Kuhlman (2 plants) and by two affiliated companies, namely, St. Denis and St. Clair du Rhône.

The manufacture of Portland cement was developed considerably in France in the pre-war years. Under present conditions of the German occupation the production of cement continues at a record level in the occupied zone, but it is reported that all but 5 to 10% continues to be reserved for the authorities of occupation. This industry is reported to be favored in the distribution of coal in order to insure sufficient production in the occupies zone for the Germans and in the unoccupied zone for the French. At the same time it is reported that 82% of the shares of the French cement industries have been acquired by a group of German companies. It is claimed that in the occupied zone production is about 120,000 tons a month and between 60,000 and 70,000 in the unoccupied area - the greater part of the latter going to French civilian work.

(k) Explosive Industry

The Germans are reported to be making use of French explosive factories only for the manufacture of nitro-glycerine and T.N.T. They are reported not to be using the large French capacity for producing nitro-cellulose or picric acid. The Reich is said to receive about 4,000 tons per annum of T.N.T. and about 2,000 tons of nitro-glycerine. If Germany utilized full French capacity in both occupied and unoccupied zones, the above figures could be increased to 16,000 tons T.N.T. and 5,000 tons nitro-glycerine.

There are a large number of government arsenals which, before the war of 1939, were under the direction of a central bureau called the Permanent General Inspection of Manufactures. The most important of these arsenals are as follows: Bourges, Douai, Lyor Rennes, Puteaux, Roanne, Venissieux, Besancon, Toulouse, Vincennes, St. Éti Tulle, Alger, Valence, Tarbes, Ruelle. (See Appendix for details.) The fol ing is a general estimate of some plants:

(1) Occupied France

Name & Location	Products & Capacity m.t. per annum	Present Output	Remarks
Northern Part of Occupied Zone:			
Sevrain-Livry (Seine-et-Oise)	Poudre B- ? Cordite- 2,000	Cordite-2,000	
Esquerdes (Pas de Calais)	Amatol - 7,300	nil	Destroyed 194
Oissel (near Rouen)	Melinite- ?	nil	Believed inta
Pont-de-Buis (near Brest)	Poudre B - ?	nil	
La Rivière (near Honfleur)	Dynamite - 1.5-2,000 Amatol - 1.5-2,000 Favier - 1.5-2,000	Unknown	Nobel factory for mining explosives.
Southern Part, but North of Bordeaux:			
Vanges (near Dijon)	Amatol - 3,000	-	Obtained T.N. from St. Cham
Le Ripault (near Tours)	Poudre B - 6,000	-	Believed idle.

Bordeaux Region, to Spanish Border:			
Fleac (near Bordeaux)	Poudre B - 28,000 Amatol - 3,000 n/g 1,000	N/G 1,000	N/C and Amatol plants believed dismantled.
Blanc Pignon (Pays Basque)	High explosives no details	T.N.T. 3-4000	3 out of 5 T.N.T. plants now in operation.
St. Médard (near Bordeaux)	Poudre B - 25,000 Cordite - 2,000	Cordite 1,000	One report gives Cordite capacity as 3,000 p.t.a.
Exact Location Not known			
Moulin Blanc (St. Marc)	N/C 14,000 N/G 350	N/G 350	N/C plant destroy in 1940.

(2) Unoccupied France

Name & Location	Products & Capacity m.t. per annum	Present Output	Remarks
Bergerac (near Perigueux)	Poudre B- 36,000	nil	New factory; formerly ppoduced over 10,000 p.t.a
Toulouse	Poudre B - 56,000	nil	Maximum output achieved before the war was 15,0 p.t.a. Factory was being enlarged at beginning of war. Enormous stocks of N/C here believed intact.

(1) Leather Industry

Before the outbreak of war in 1939, hides and skins supplied by the home market were dressed in the following cities: Paris, Strasbourg, Lyon, Lille, Bordeaux, and Toulouse. The African and Asiatic hides were imported through Marseille and the South American hides through Havre, while the number of factories treating hides was reported to be about 1,000. Total domestic production in 1938 amounted to 123,000 metric tons. Current year output is reported to be 95,000 tons.

Some of the important centers of the industry were at Vendôme, Mondoubleau, Limoges (where sole leather is treated), Lille, Bordeaux, and Port-Ardennes, where heavy leather was treated, in Brittany and Normandy (tanned or dried leather), and at Chateaurault, Lyon, Roman, and Limoges (dressed hides). The skin trade dealt with the skins of calves, goats, and kids. The chief centers for this industry were Annonay, Millau, Lyon, Orléans, Paris, and Saint Denis, and for goat skins,- Marseille.

(m) Textile Industry

The Ardèche, Bouches-du-Rhône, Drôme, Gard, Hérault, Lozère and Var departments, with 43 spinning mills, as well as the important centers of Lyon and Saint Étienne, make up the regions of the great French silk industry. In 1937 there were 2,258 tons of silk spun in Lyon and Saint Étienne. In the same year Roubaix-Tourcoing, district of Lille, spun 64,638 tons of linen, and Mazamet, 33,511 tons of linen. In cotton production the two cities of Roubaix-Tourcoing (Lille) and Amiens produced or spun 5,416 tons in 1937. In 1937 France produced 19,000 metric tons of flax; and for 1941 the estimate was 25,000 tons. The 1937 hemp production amounted to 4,000 tons, and imports were 19,000 tons. The 1941 output is estimated at 5,000 tons, and:

	1938	1941
Rayon	27,000	41,000
Staple fiber	5,000	21,000

The cotton industry is one of the most important in France. The works are found particularly in the north, Normandy, the Vosges, Alsace, and the Center. France occupies the fourth place in the world cotton spinning and weaving industry.

Outside of Lyon silk district, ribbons, and passementerie are manufactured at Saint-Étienne; braids and plaitings at Saint Chamond; muslin at Tarare; silk hosiery at Troyes; and lace at Calais and Caudry.

Before the war, the woolen industry in Franc had reached a high rate of production; 20 billion francs was the value of the annual production, and consumption amounted to more than 300,000 tons of wool. The most important manufacturing center is constituted by the two sister-cities of Roubaix and Tourcoing in the Lille region and the towns around Fournier. Mulhouse, Colmar, and Saint-Marie-aux-Mines form an important group in Alsace. Rheims, Sedan, Elbeuf, Vienne, Troyes are other important centers. The pre-war production estimate is placed at 49,000 tons for the yarns and 70,000 tons for the fabrics. In the past year it is reported that Germany has carted off 33,000 tons of wool in all forms including the reserve stocks in Le Havre (which is the largest cotton and wool market on the continent) and in Cherbourg, Nantes, and Bordeaux. It is now believed that France is practically drained of wool. All the raw cotton in the French army stocks was sent to Germany, but all privately held cotton was reported left in France to keep the textile industry working. However, between Oct. 1940, and Oct. 1941, Germany was reported to have taken 24,000 tons of finished fabric.

The Germans forced a production plan on the French textile industry after the armistice called the "Kehrl Plan" which was to operate until May 1942. By this plan, almost the whole of French textile production has been working for the forces of occupation. Sixty specialized mills in Calais were reported to have been working on a German order for 220,000 square meters of mosquito netting. Northern mills have been reported working on an order for 1,150,000 square meters of German field-gray uniform cloth.

The production of rayons, according to French press estimates was expected to reach 40,000 tons in 1941 (as against actual output of 34,000 tons in 1939, and 28,000 in 1940).

While the textile industry as a whole had been reported to be working on a schedule lower than the theoretically permitted maximum of 30% of the 1938 operations, and particularly the cotton section, linen operations are reported to be working at the maximum schedules.

(n) Rubber Industry

Being cut off from most of her normal rubber supply, France has been largely dependent upon German allotment. In

January, 1942, the total allotment of rubber to the French tire manufacturers was reported to be 788 tons, which included 160 tons of buna. At the same time, it is reported that not one of the manufacturers (Goodrich, Dunlop, Bergougnan), all three of which had signed an agreement with the Germans by which they were to furnish supplies of buna to the French firms, had produced a single buna tire. It was reported (Feb, 1942) that the total allotment of rubber to the entire French rubber industry in 1942 is 850 tons, which includes 400 tons of buna, as against 1,050 tons of rubber alone which was alloted during 1941. Michelin is reported to be the only firm refusing to collaborate with Germany and consequently received a minimum allotment.

(o) Paper Industry

In the pre-war years, this industry developed very quickly. It was carried on in several centers of varying importance, among which may be mentioned Angoumois, Ardèche, Limousin, Jura, the Vosges, and more particularly Dauphine and the valley of the Seine from Corbeil to the estuary. Among the important centers in Dauphine are Pont-de-Claix in the Drac Valley, Lancey in the Greisvaudan Valley, and Voiron in the Morges Valley. Among the works in the Seine valley are those of Essonner and Grand-Quévily. The Alsace and Pas-de-Calais districts also contain a number of mills.

Under the present conditions of occupation insufficient supplies of pulp and fuel, as well as the uncertainty of future deliveries are reported to be making operation of the paper industry extremely difficult. Reports of January, 1942, indicate that production is now estimated at 30,000 tons a month: 15,000 for newspapers, 9,000 for the government, and the balance for the general public. Many of the paper mills have been shut down, and it is reported that in some cases the machinery may have been removed.

(p) Oil Production Industry

In 1939 France produced 500,815 barrels of crude oil and in 1940 was reported to have produced 500,050 barrels. The collapse of France in the summer of 1940 brought approximately 75%

of the existing oil refineries under German control. It is reported that certain plants situated near the border of Belgium and comprising oil refineries and smaller hydrogeneration plants may have suffered greatly during the period of hostilities. For the first four months of 1941, the Germans allowed 80,000 tons of petroleum products for the whole of France, divided equally between the occupied and the unoccupied territories. Of this total 25,000 tons were reported to be motor gasoline. The stocks within the country, whether in the occupied or the unoccupied zone and not actually held by the German military authorities, were pooled for the benefit of all. The oil trade in the occupied and the unoccupied regions is now reported to be organized on a cooperative basis under the chairmanship of Jules Menyl, president of the *Chambre Syndicale* and director of the *Companie Française de Pétroles*, assisted by 2 advisory committees on oil products proper and on combustion fuels. The only part of France where oil is drilled is in Pechelbronn, Alsace, and in southwestern France. To supplement the meager supply of imported oil it is reported that strenuous efforts are being made to utilize the country's domestic resources to the full. For this purpose a new, government-supported company, the *Société Nationale de Pétroles d' Aquitaine*, has been formed to exploit the natural petroleum products of southwest France. The reserves of this field, discovered shortly before the outbreak of the war, are reported to be considerably greater than those of Pechelbronn, which is now in enemy hands, but which, in recent years, produced about 25,000 tons annually.

By a Franco-German agreement, the Reich was supposed to send to France 2,000 tons a month of lubricating oil; but in February of this year they sent only half that amount and since then have sent none. With total French production - all mixed with substitute products - at 2,500 tons a month, and her needs placed at 17,000 tons for the second quarter of this year, a very serious situation is developing. Passenger car licenses are reported to have been reduced from 10,000 in December to 5,000 at the present time. (June, 1942).

In July 1940, a plan was announced by the Vichy Government to convert 150,000 vehicles into wood or charwood burners. It has been reported that there are 5,000 vehicles in unoccupied France fitted with "such burners".By the end of 1941 it was hoped to make available 1,000,000 tons of solid fuel, sufficient for 150,000 cars However, there are no indications as to the success of this plan, and it is doubtful if it has reached even the minimum of success expected.

Normally France (with Algeria) was the largest producer of industrial alcohol in Europe, with an annual average production of over four million hectoliters. Of the French sugar beet crop, 30% in normal times went straight to the distillers. In 1940 however, only about 1/3 of the normal acreage was harvested. In 1941 the acreage was 2/3 of normal, but owing to the exhaustion of sugar stocks only a million hectoliters are expected to be produced.

It should be noted that, according to a report of June 11, 1942, the Nazis have taken all the cracking equipment from Port Jerome, Saint-Nazaire, and Dunkerque into Germany. The following is a list of places throughout France where petroleum refineries are located:

Autun (Saône-et-Loire)
L'Avera (Mediterranean area; near Marseille)
Bec d'Ambes (Gironde)
Berre (Bouches-du-Rhône)
Brest (Finistère)
Courchelette (Nord)
Donges (Loire-Inférieure)
Dunkerque (Nord)
Frontignan-Sète (Hérault)
Gonfreville (Seine-Inférieure)
Gravenchon (Seine area; near Paris or Rouen)
La Mailleraye (Seine-Inférieure)
Martigues (Bouches-du-Rhône)
Merkwiller-Pechelbronn(Bas-Rhin)
Pauillac (Gironde)
Port Jerome (Eure)

The Standard Oil Company of New Jersey has bulk terminals and depots at the following points:

Cette
Cherbourg
Dunkerque
Gennevilliers
Marseille.
Nantes
La Palliee
Port-St. Louis-du-Rhone
Rouen

Before the war it operated bulk depots in 89 cities and towns scattered throughout France.

At the principal ports of France are the following storage facilities for petroleum:

Port	Capacity cu. yds.
Bayonne	2,158
Bordeaux and adjacent ports	27,670
Boulogne	647
Brest	11,403
Caen	2,580
Calais	318
Cherbourg	21,163
Naval storage at Haineville	91,000
Dieppe	797
Dunkerque	124,861
Le Havre	18,581,208
Marseille	53,052
Nantes	20,509
Nice	2,881
La Rochelle-La Pallice	79,560
Rouen	133,824
St. Malo-St. Servan	9,156
St. Nazaire	9,400
Sète	562
Toulon	298,000
Storage at shipyard at La Seyne	188,500

33. Utilities

a. Electric Power

The French power plants are divided into two main groups. The most important plants are either hydraulic or thermal, the latter being subdivided according to the source of energy: coal, pulverized coal, coal leavings coke, lignite, garbage, heavy oil, gasoline, blast furnace gases, coke furnace gases. In general, the thermic and hydro-electric plants are divided geographically. Nearly all the hydro-electric plants are in the southern half of France with more than 50% of the productive capacity reported to be in Savoy, Isère and Hautes- and Basses-Pyrénées departments. This is due, of course, to the great mountain water supply. Because of proximity to the coal producing regions the northern half of France has been largely supplied by the thermic stations. Of the 5,231,520 kilowatts produced in 1931, the departments of Seine, Nord, Pas-de-Calais, Moselle and Meurthe-et-Moselle produced 65%. The Nord and Pas-de-Calais stations are in general controlled by the coal mines and those of Moselle and Meurthe-et-Moselle by the metallurgical industries.

In 1935 there were reported to be in existence 585 power plants altogether; and a 1938 estimate indicates that less than a million of the country's population is without electric lights, and that 94% of French houses are electrified.

In 1936 the total power production reached 15,800,000,000 kilowatt-hours, and the total power consumption has been estimated in recent years at 13,400,000,000 kilowatt-hours (allowing for the loss of 2,900,000,000 kilowatt-hours in transmission). The consumption is divided as follows:

High Tension

Traction	959,000,000
Électro-chemical and électro-metallurgical	2,241,000,000
Other usages	7,362,000,000
TOTAL	10,562,000,000 kilowatt-hours

Low Tension

Light and domestic usage	1,904,000,000
Motor Power	962,000,000
TOTAL	2,866,000,000 kilowatt-hours

At the present, however, a general power shortage is reported in unoccupied and occupied France. In unoccupied France, where most of the hydro-electric power stations are located, a recent drought is considered partly responsible; in occupied France, however, the shortage is mainly due to the scarcity of coal, which, in turn, is believed to be caused essentially by the lack of imports, the shortage of labor, and destruction caused by the German invasion in 1940.

There are reports which indicate that Germany is anxious to see French hydro-electric power developments succeed. It is claimed that considerable capacity is being added in the Pyrenees, and that high tension lines of 220,000 V. are being constructed to feed the power into the French grid system. At the same time, it is reported that one-half of the power produced in unoccupied

France was supplied to occupied France and the Rhineland. It is also reported that the French have just completed a new plant at the Genissiat Dam (Rhone River) which is one of the largest hydro-electric developments in France. Energy from this dam is expected to be fed into the R.W.E. system in the Rhineland, and it is reported that such transmission might reach 1,000,000,000 k.w.h. per year.

b. Ice Plants

In 1926 France had 45 refrigeration plants spread out over the national territory and connected by railroad. The total capacity at that time for cold storage space was estimated at 292,972 cubic meters. The storage space of French ports was estimated at around 161,160 cubic meters. A great many of the coastal plants were apparently constructed and owned by English firms operating as French companies. (See Appendix for list of plants and individual capacities.)

c. Water Supply

The French water supply is derived from several sources and is distributed by different systems throughout the country. As an example of the urban supply, the Paris system is composed of two distinct and absolutely independent systems of distribution. The first called the "private systems," distributes spring water obtained at a distance from Paris and conducted by hermetically sealed aquaducts to covered reservoirs in Paris, from which it is distributed by a local system of canalization in such a way as to permit its delivery to individual taps in a fresh and pure condition.

The second system is the filtered river water supplied by the Seine and the Marne, purified in filtration plants, and conducted to the same reservoirs as are used for spring water, and with which it is combined.

For a detailed and technical description of the water system and supply in every major French community see the Appendix.

d. Gas Works

The number of gas sales in France in 1935 amounted to 65,324,000 M.F.C. (thousand cubic feet) all of which was manufactured gas. France produces no natural gas for consumption. As such, she ranks in fourth place in world gas production with sales increasing very, very little over a period of about ten years.

See Appendix for a list of towns, with population figures, where gas plants exist and also the name of the chief official).

34. Railroads

a. National Railway System

The French railway system is composed of 26,540 miles of main lines owned and operated by the Société nationale des chemins de fer, a State corporation, and 9,170 miles of local lines owned and operated by private companies.

(1) Société nationale des chemins de fer.

The basic pattern of the primary French system is a network of lines radiating from Paris to the frontiers, but there are also many transverse lines which do not lead to the capital and make possible direct connections across the spokes of the radial network. The total length of line in use in 1938-39 was 26,540 miles and 2,000 miles of this number were electrified; in 1936, 13,440 miles of line were single-track and 13,000 miles were multiple-track. In the same year these lines carried 191,000,000 tons of merchandise and 577,227,000 passengers.

The system is divided into five operating regions as follows:

(a) Northern Region

This region has 2,380 miles of standard gauge line serving the rich industrial and mining districts of the north and northeast and the Channel ports. Its lines connect with the Belgian railways and by way of them with the railways of the Netherlands and Germany.

(b) Eastern Region

The lines of this region, 3,188 miles in length and standard gauge, serve the eastern departments of France and connect Paris with the railways of Alsace-Lorraine and Germany. It also carries a heavy traffic to Italy and Switzerland via Bâle, and by its junction with the Northern Region at Laon it provides direct connections between the Channel ports and Switzerland without passing through Paris.

The Railways of Alsace-Lorraine were operate before the present war by a sub-management of the Eastern Region, but sin the Armistice of 1940 they have been incorporated into the German

Reichsbahn. In 1937 they included 1,435 miles of standard gauge line.

(c) Western Region.

This section, serving France west of Dieppe, Paris, and Bordeaux, operates 5,720 miles of standard gauge line, and 239 miles of narrow gauge line; 336 miles of the standard gauge line is electrified.

(d) Southeastern Region.

The Southeastern Region has 6,330 miles of line, of which 23 miles are narrow gauge electrified line, and 89 miles are standard gauge electrified line. It joins Paris with Lyon, Marseille and the Riviera, connects with the Swiss Federal Railways, and has direct connections with Italy via both the Riviera and the Mt. Cenis tunnel.

(e) Southwestern Region

This region operates 7,860 miles of standard gauge line and 240 miles of narrow gauge line serving central and souther France and connecting Paris with Toulouse, Bordeaux, and the Spanish frontier. Its electrified lines, 1,506 miles in length, are the most extensive of all the regions of the national system; the line from Paris to Irun on the Spanish frontier via Orléans, Tours, and Bordeaux is electrified over its entire length.

(2) Local Railways

In addition to the major system there were in 1938-39, 9,170 miles of local railways and 1,320 miles of tramways. Most of the local railraods had tracks of 3 feet 3 inch gauge.

b. Permanent way

(1) Equipment

Gauges
- Standard - 4 feet $8\frac{1}{2}$ inches (1.435 meters)
- Narrow - 3 feet 3 inches (1 meter)

Type of rail - Flat-bottomed section

Weight of rails
- Standard gauge - 60 to 126 pounds to the yard (30 to 62.45 kilograms to the meter)

93 pounds to the yard (46 kg. to the meter) is the most common weight in general use.

Length of rails - 19 feet 8 inches (6 meters) to 78 feet 8 inches (24 meters)

Sleepers - Wood, metal, wood and metal, and concrete

Ballast - Slag and stone.

Current used on electrified lines - 1,500 volts direct current.

(On the suburban lines operated out of Paris by the Eastern Region 600 volt direct current was in use in 1936.

(2) Condition of Permanent Way.

The roadbed and permanent equipment of the right-of-way in some parts of France suffered serious damage during the war, but by the spring of 1941 most of the damage had been repaired, and the railroads were no longer hampered by it in their operations. In northeastern France, however, the damage to junction points by British bombings still interferes with rail movements. Observers report that in general the roadbeds are well maintained, that rails and ties are in good condition, and that trains are operated on the main lines at the customary high speeds.

c. Rolling Stock.

(1) Rolling stock on hand in 1938-39

	Major Systems	Local Railroads	Total
Locomotives	19,106	1,709	20,815
Including -			
1) Electric Locomotives	583	----	583
2) Narrow gauge Locomotives	91	--	--
Electric motor cars	230	--	230
Motor rail cars	631	814	1,445
Passenger cars	37,787	4,460	42,247
Including			
1) Narrow gauge cars	227	--	--
Freight cars	530,518	24,767	555,285
Including			
1) Narrow gauge cars	1,665	--	--

Tank cars	354	—	354
Including			
1) Narrow gauge cars	2	—	—
Baggage cars	2,634	—	2,634
Including			
1) Narrow gauge cars	3	—	—

(2) German requisitions of rolling stock.

	Requisitioned	Remaining to France
Locomotives	4,500*	16,300
Freight cars	218,000**	337,000

*Including 1,500 lost with the Railways of Alsace-Lorraine.

** Including 39,000 lost with the Railways of Alsace-Lorraine.

There are no reports of German requisitioning of other types of rolling stock. Losses have probably not been offset to any significant extent by new construction.

(3) Present condition of rolling stock.

Observers report that rolling stock on the French railways appears to be poorly serviced and in bad condition. Inadequate repairs and the shortage of lubricating oils have contributed to its deterioration.

(4) Locomotive repair shops.

Locomotive repair shops are located at the following points:

Northern Region:	La Chapelle, Hellemmes
Eastern Region:	Épernay
Western Region:	Batignolles (Paris), Satteville.
Southeastern Region:	Nevers, Oullins, Arles, Nîmes.
Southwestern Region:	Tours, Ivry, Périgueux.

(5) Standard types of cars.

	Capacity metric tons	Number of wheels
Freight cars	20 and 30	4
Flat cars	20	4
Gondola	20	4
	Capacity, gallons	
Tank cars	4,488 to 5,280	4

34[1]. Inland Waterways

a. Extent and Economic Importance

France has an extensive system of canals and navigable rivers which in normal times are an important element in the country's transportation system. In 1937 the total length of waterways in use was 6,000 miles, of which 3,200 miles were canals and the remainder rivers and lakes. Most sections of the country are served by the waterways, but the network is most comprehensive in the mining and industrial districts of the north-eastern and eastern departments and it connects directly there with the inland waterway systems of Belgium and Germany. Tonnage carried amounted in 1936 to 52,600,000 tons, about one-fourth the tonnage carried by the railroads in the same year. The traffic was made up of heavy bulk materials which did not require rapid movement; one-third of the tonnage was mineral fuels and another third was building materials.

b. Principal Routes

The principal lines of traffic and their connections are listed below. See Appendix on Waterway for lists of individual canals and rivers giving lengths, depths, and the dimensions of locks, bridges, and tunnels.

(1) Paris to the Belgian frontier and the Channel Ports.

Route: Seine River (Paris to Andresy); Oise River (Andresy to Janville); Lateral Canal of the Oise (Janville to Chauny); St. Quentin Canal (Chauny to Cambrai); Escaut or Scheldt River (Cambrai to Étrun); La Sensée Canal (Étrun to Corbehem); Scarpe River (Corbehem to Flers-en-Escrebieux to Bauvin); Aire Canal (Bauvin to Aire); Neufossé Canal (Aire to St. Omer); Aa River (St. Omer to Gravelines).

Affluents:

Aisne River: Junction with Oise River near Clairoix to junction with Lateral Canal of Aisne at Celles.

Oise-Aisne Canal: Abbécourt to Bourg-et-Comin.

Sambre-Oise Canal: Fargniers to junction with canalized Sambre at Landrecies; Sambre continues to Charleroi and Namur in Belgium.

Somme Canal: St. Simon to St. Valéry at mouth of the Somme River.

Escaut or Scheldt River: Etrun to Gand and Antwerp in Belgium.

Scarpe River: Flers-en-Escrebieux to junction with Escaut or Scheldt River at Montargne.

La Deule Canal: Bauvin to Belgian frontier; continued to junction with Escaut or Scheldt River in Belgium.

Lys River: Aire to Courtrai and Gand in Belgium.

La Colme Canal: Watten to Belgian frontier; continued in Belgium to junction with Furnes Canal at Furnes.

Calais Canal; Le West to Calais.

Bourbourg Canal: Le Guindal to Dunkerque; continued by Canal de Furnes to junction with Gand-Ostend Canal in Belgium.

(2) Northeastern France to Strasbourg (connects with the line from Paris to the Channel ports at Abbécourt on the Lateral Canal of the Oise)

Route: Oise-Aisne Canal (Abbécourt to Bourg); Lateral Canal of the Aisne (Bourg to Berry-au-Bac); Aisne-Marne Canal (Berry-au-Bac to Condé-sur-Marne); Lateral Canal of the Marne (Condé-sur-Marne to Vitry-le-François); Marne-Rhine Canal (Vitry-le-François to Strasbourg).

Affluents:

Ardennes Canal: Vieux-les-Asfeld to junction with Meuse River and northernbranch of Canal of the East; Meuse continues to Namur and Liége in Belgium and to Maastricht and junction with the Rhine in the Netherlands.

Marne-Saône Canal: Vitry-le-François to Heuilley.

Canal of the East: Northern Branch, Troussey to Belgian frontier; continued by Meuse River to Belgium and the Netherlands; Southern Branch, Toul to junction with canalized section of Saône River at Corre.

Moselle River: Frouard to Metz; continued to Thionville by the Mines de Fer de la Moselle Canal.

Houillières de la Sarre Canal: Gondrexange to junction with canalized section of Saar River at Saarguemines; Saar continues to Saarbruck in Germany.

Rhine-Rhône Canal: Strasbourg to St. Symphorien.

Rhine River: Strasbourg north to the German frontier; Rhine continues through Germany to the Netherlands and the North Sea. Rhine is not always navigable south from Strasbourg to Switzerland; traffic in this direction may move via the Rhine-Rhône Canal to Ile Napoléon and thence to the Rhine via the branch to Huningue.

(3) Seine River Network

Route: Seine River (Le Havre to Marcilly)

Affluents:

Oise River: Andresy to beginning of Lateral Canal of the Oise at Janville.

St. Denis Canal La Briche to port of La Villette in Paris.

St. Martin Canal: Port of La Villette to Seine River in Paris.

Marne River: Charenton to beginning of Lateral Canal of the Marne at Dizy and to Epernay.

Loing Canal: St. Mammès to beginning of Briare Canal and Orléans Canal at Buges.

Yonne River: Montereau to beginning of Nivernais Canal at Auxerre.

Haute-Seine Canal: Marcilly to Troyes.

(4) Paris to Roanne

Route: Seine River (Paris to St. Mammès); Loing Canal (St. Mammès to Buges); Briare Canal (Buges to La Cognardière); Lateral Canal (La Cognardière to Digoin); Roanne-Digoin Canal (Digoin to Roanne).

Affluents:

Orleans Canal: Buges to Orléans.

Berry Canal: Marseilles-les-Aubigny to Noyers via northern branch and to Montluçon via southern branch.

Center Canal: Digoin to junction with Saône River at Chalon-sur-Saône.

Nivernais Canal: St. Leger-des-Vignes to junction with Yonne River at Auxerre.

(5) Saône River network

Route: Saône River (Lyon to Corre)

Affluents:

Canal of the East, Southern Branch: Corre to junction with Marne-Rhine Canal at Toul.

Rhone-Rhine Canal: St. Symphorien to Strasbourg. Branch of Huningue leaves canal at Ile Napoléon near Mulhouse and leads to the Rhine at Huningue.

Bourgogne Canal: St. Jean-de-Losne to junction with Yonne River at Laroche.

Center Canal: Chalon-sur-Saone to junction with Lateral Canal of the Loire at Digoin.

(6) Southern Network

Route: Garonne River (Atlantic Ocean to Castets); Lateral Canal of the Garonne (Castets to Toulouse); Midi Canal (Toulouse to Les Onglous); Étang de Thau (Les Onglous to La Peyrade); Rhône-Sète Canal (La Peyrade to Beaucaire); Rhone River (Beaucaire north to Lyon and Le Parc and south to Mediterranean Sea.

Affluents:

Bec d' Ambes to Libourne.

Rhône-Marseille Canal: Arles to Marseille.

Saône River: Lyon to Corre.

(7) Western Network

Route: Loire River (Nantes east to the Atlantic and west to beginning of Lateral Canal of the Loire at Briare); Nantes-Brest Canal (Nantes to Chateaulin); Aulne River (Chateaulin to roadstead of Brest at Landevennec).

Affluents:

Blavet Canal: Pontivy to Hennebont.

Orléans Canal: Orléans to junction with Briare and Loing Canals at Buges.

Lateral Canal of the Loire: Briare to junction with Center and Digoin-Roanne canals at Digoin.

c. War Damage to Waterways

War operations in 1939-40 rendered unnavigable 3,200 miles of French inland waterways, but by the beginning of 1942 all but 25 miles had been repaired and restored to use.

d. Boats and Barges

(1) Numbers, Construction, and Capacities

The French inland waterway fleet in 1935 was composed of 648 tow-boats, 2,713 self-propelled passenger and cargo boats, and 9,874 barges. At the same time the numbers of foreign boats of these three types operating on French waterways were, respectively, 5, 476, and 774. Of the 9,874 French barges 9,640, with a tonnage of 3,690,000 were general cargo boats, and 234, with a tonnag of 121,000, were tankers for the transport of liquids in bulk; 3,435 of the barges were constructed of steel, 576 of wood, 213, of wood and steel, and 23 of concrete. Their carrying capacities varied from 3.3 to more than 1,100 tons. The 2,713 powered boats were of the following types: 232 passenger boats, 2,146 general cargo vessels with a tonnage of 689,000, and 335 tankers with a tonnage of 129,500. 1,901 of the boats were of steel construction, 576 of wood, 213 of wood and steel, and 23 of concrete. The capacities of the cargo vessels and tankers varied between 3.3 and 1,100 tons, and the motive power between 50 and 1,000 horsepower.

(2) Standard Types

The principal standard types of canal and river barges in use before the war were:

	Length	Beam	Draft when loaded	Carrying Cap.(tons
Peniche flamande (in use on standard canals)	Up to 126'	16'5"	5'11"	300
Chalands (in use on principal canalized rivers)	110' to 167'	16'5" to 26'	6'7" to 10'	300 to 60
Grands Chalands (in use on principal canalized rivers)	173' to 206'	26'6"	10'7" (maximum)	Up to 1,000

(3) War Damage

During the war some 2,000 canal and river boats and barges were sunk and another 1,000 damaged. It was expected that two-thirds of these could be repaired and returned to use. Soon after the Armistice the Germans took over some 300 barges for military use, but there have been no reports of additional requisitions.

e. Towing Services

Non-self-propelled barges were moved before the war by two types of tow-boats and by locomotives and tractors operating on the banks of the waterways. The most common type of tow-boats was the ordinary tug propelled by paddle-wheels or propellors, but in 1935 there were still 40 boats which moved by drawing themselves along a chain or cable suspended in the river or canal bed. The latter type were in important use only on the Loire, the Rhône below Lyon, and in the tunnels of the Marne-Rhine and St. Quentin canals. The power of both types varied between 50 and 1,000 horsepower. Towing from the banks was provided in 1935 by 1,183 machines, of which 960 operated on rails. The standard gauge of the rails was 3 feet 3 inches (1 meter), but on the Rhône-Rhine Canal it was only 1 foot 11½ inches (0.6 meters). In 1935 the following waterways were served by towing locomotives operating on rails:

(1) Rivers

Moselle (canalized section); Escaut or Scheldt (Etrun to Belgian frontier).

(2) Canals

Aire; Aisne (lateral)*; Aisne-Marne; Deule; Marne (lateral); Marne-Rhine; Mines de fer de la Moselle; Neufossé; Oise (lateral); Oise-Aisne; Rhône-Rhine*; St. Denis; St. Quentin; Sensée.

(* not served over its entire length)

35. Roads

a. General Road Plan and Condition

The principal roads of France were designed to connect Paris, the capital, by the most direct routes with the military centers of the country and the frontier. In order to accomplish this, it has sometimes been necessary to by-pass large towns and populated areas, which are subsequently connected with the main road arteries by secondary roads.

The total amount of road mileage in France is approximately 397,792 miles. These roads are divided up into the following categories:

National highways	49,856 mi.
Main connecting roads	106,829 mi.
Secondary roads of common interest	54,375 mi.
Ordinary country roads	188,687 mi.
Departmental roads	3,500 mi.

(1) Width.

The present 49,856 miles of national roads are reported to be constituted very much as follows:

(a) Formerly 312 miles and increasing to 12,000 miles of road 29 feet 6 inches wide, with three lanes 9 feet 8 inches in width.

(b) 17,812 miles of road between 20 and 30 feet wide; some are 22 feet 10 inches wide with two lanes of 11 feet 5 inches in width.

(c) 23,750 miles of road between 15 and 20 feet wide; some are 19 feet 8 inches wide, with two lanes 9 feet 9 inches in width.

(2) Tree Planting.

Trees are planted, according to recent regulation, about 36 feet apart on a minimum basis, although on older roads they are 26 feet apart.

(3) Road Weights.

By a government decree issued in 1934, the maximum weight of vehicles permitted on roads was 13 metric tons; but since the war this has probably been raised to 24 metric tons.

(4) Bridges.

On the national highways there are reported to be a great many bridges whose use is limited to vehicles under a certain maximum weight. There are also reported to be an insufficient number of strong bridges on the departmental roads and other roads maintained by local authorities.

In northern and eastern France, however, there are reported to be only a small number of bridges with load limits; and the same is reported to be true of the Seine Valley. The majority are reported to be of sturdy stone construction, and the more recent ones of reinforced concrete.

It is reported that in Brittany, where the coast is indented with river mouths, there are many places where there are no bridges at all; and consequently there is a great need for bridge construction in this area.

In the Loire Valley, there are many suspension bridges with load limits, although recent reports from Tours, on the Loire, indicate that the "swing" bridges no longer exist, and that new concrete and suspension bridges are being built.

Reports indicate that, bad as the situation of bridges in Brittany may be, the situation on the south side of the Massif Central, in Languedoc, and in the Alps, and, above all, in the valley of the Rhone and its tributaries, is deplorable. Only two of the twenty-odd bridges crossing the Rhône between Lyon and Tarascon are reported to be of stone construction, and they are the only ones which carry an unlimited load. Above Lyon there are reported to be five suspension bridges with limits of from 2 to 4 metric tons.

b. Post-Armistice Roads and General Road Condition.

All French roads were reported, as late as December 31, 1938, to be in a generally good state of upkeep and repair; but, with the invasion and ensuing hostilities during the summer of 1940, the total number of bridges and "road works" destroyed amounted to 2,531, of which there were 632 bridges of more than 131 feet in length. However, by June 1, 1941, 376 bridges were reported to have been repaired, of which 18 were over 131 feet long.

(1) Grading.

The grading of French roads is calculated at about 5% in non-mountainous areas, and 8 to 10 per cent is accepted in mountainous regions. The standard curve in open country is claimed to be 1,000 feet radius, but in mountainous areas radii as low as 100 are reported, and the maximum super-elevation on curves is 8 per cent.

Road shoulders are generally 3 feet 3 inches wide and are raised about 3 inches above the surface of the road pavement.

(2) Construction and Repair.

In past years the construction and repairs of French roads are reported to have been done chiefly with manual labor, and it is claimed that there has been a noticeable lack of graders. The road machinery used in France consists mainly, if not exclusively, of steam or gasoline rollers, scrapers, etc.

Before the war, over 300,000 tons of bitumen emulsion and over 500,000 tons of tar were used annually on the whole of French roads--national and secondary highways. While the total length of concrete roads was gradually increased before the war, there has been no attempt to construct great continuous lengths, owing primarily to the fact that road-building has been comparatively small in recent years.

The composition of road material varies considerably, but the oldest and simplest of materials is reported to be stone ballast, composed of a mixture of broken stone, sand, and water, and then beaten down hard with large rollers. This is the ordinary macadam, which is improved with a superficial coating, usually of tar, which with the combined materials produces the desired cohesion, protecting the surface and to a large extent preventing dust.

c. New Road Construction.

The German press of October, 1941, carried an announcement that the French were planning to build three new highways:

(1) one running to northern France from Paris, which would connect with the projected Reichsautobahn at Liége;

(2) a second running from Paris to Lille; and

(3) a third, from Paris to Calais.

For the construction of these three roads it is claimed that four billion francs have been appropriated.

At Lyon, a vehiclular tunnel under the Croix-Rousse section of the city may be already completed, but it is not certain. The completed tunnel will constitute with its projected approach the junction of two of the most important highway routes in France--from Paris to the Mediterranean via the Rhône-Saône Valley and from Bordeaux and other Atlantic ports to the Alps by the upper Rhône Valley.

d. Motor Transport Facilities.

In 1940 there were 2,192,471 vehicles registered.

Because of the enormous scarcity of gasoline and lubricating oils, not to mention the rubber shortage, it is estimated that only about 100,000 cars, trucks and autobuses, or 3½ percent of the total number of vehicles formerly registered, are now in use. It is also estimated that about 30,000 of the trucks now in use operate on charcoal and other substitutes for gasoline, stocks of which do not exceed 7 per cent of normal. The total number of trucks in the Paris area is estimated at 3,000 or less.

In a country which, in 1938, had 6.5 automobiles to one mile of road, there were formerly garage facilities in sufficient number to meet the national requirements. Under the present circumstances, however, it can be assumed that such facilities are at a minimum, and in a great many localities, no doubt, non-existent. Spare parts for automobiles cannot conceivably be available for popular use because of the law that all automotive production is destined for either German or French national needs.

36. Shipping

a. Merchant Marine.

(1) Number of ships and tonnage.

In June, 1939, the French merchant fleet was composed of 1,231 vessels with a combined gross tonnage of 2,933,933. Wartime losses amounted to approximately 1,469,000 tons, and an additional 33,000 tons were converted to naval auxiliaries. The French Government seized some 270,000 tons of Allied and neutral shipping, but part of it has been turned over to the Axis powers.

At present the Vichy Government has at its disposal about 1,500,000 tons of merchant shipping. In April, 1942, 329 vessels of 1,000 or more gross tons each, having an aggregate tonnage of 1,408,000, were known to be operating from, or to be laid up in, ports of the unoccupied zone or in French Moroccan or West African ports.

(2) New Construction.

French shipyards are now very active, especially in the occupied zone, where most of the large establishments are located. Launchings of merchant ships in 1941 have been estimated at 115,000 tons. In September, 1941, there were under construction or projected in the yards of the occupied zone 21 dry cargo vessels and 4 tankers for the French merchant fleet; they had an aggregate tonnage of more than 148,000 tons. Five cargo vessels and one tanker of this group were scheduled for launching in 1942, and all were to be launched before the end of 1944.

(3) Tonnage Carried.

In 1937 French merchant vessels carried 31,000,000 tons of merchandise to and from French metropolitan ports. At present the much smaller merchant marine is carrying at a rate of about 6,500,000 tons annually. The movements and cargoes of all French ships are now controlled by the Armistice Commission; its permission must be obtained for every sailing, and manifests of inbound vessels must be submitted to the commission's agents, who supervise the discharge and disposal of the cargoes.

b. Ports.

(1) Principal Merchant Ports.

In 1937 the French ports handling the largest tonnage of mercantile shipments were as follows:

Port	Number of Arrivals and Departures	Tonnage Discharged	Tonnage Loaded
Marseille	13,619	12,713,000	12,789,000
Le Havre	15,877	9,356,000	6,868,000
Cherbourg	2,171	7,292,000	7,047,000
Rouen	17,931	4,390,000	1,045,000
Dunkerque	6,343	3,897,000	2,127,000
Boulogne	5,899	3,068,000	2,951,000
Bordeaux	11,505	3,069,000	1,764,000
Port de Bouc and Berre	4,302	1,044,000	539,000
Calais	4,419	1,515,000	1,216,000
Nantes	4,206	1,383,000	621,000
Sète	3,036	1,139,000	743,000
Dieppe	2,147	1,035,000	793,000

(2) Ports and Port Facilities.

The principal maritime ports of metropolitan France are listed below with basic information on accessibility and capacity and available indications of damage resulting from the war. For details of entrances accomodations, docking space, depths, and dry docks, see Appendix on ports.

(a) English Channel Coast.

(1) Dunkerque.

The roadstead offers good anchorage in 42 to 59 feet of water at low tide. The Outer Harbor, depth of 32 feet, and the Port d'Echouage, depth of 16 feet, have 7,225 feet of dock, and the Inner Harbor has some 30,000 feet of dock with depths varying from 17 feet 7 inches to 39 feet 4 inches. Mechanical unloading equipment and extensive storage facilities are available in both harbors. In August, 1941, it was reported that the harbor entrance was obstructed by blockships, and only small craft could enter.

(2) Calais.

The roadstead offers good anchorage in 35 to 39 feet of water. In the port there are more than 11,000 feet of quayage provided with modern unloading machinery and storage space. Depths vary from a minimum of 12 feet 4 inches at one quay to a minimum of 41 feet 7 inches at another.

(3) Boulogne.

There is a good anchorage in 32 feet of water in the shelter of the breakwater. The port has 12,000 feet of docks with depths alongside varying from 14 feet to 21 feet 9 inches at low tide and from 24 feet to 43 feet 6 inches at high tide. The docks are equipped with mechanical cranes, and warehouse space is available. In the summer of 1941 the port was used only by E-boats and patrol vessels.

(4) Dieppe.

The roadstead offers a good anchorage in 26 feet of water, but it is unsheltered from sea winds. In the port there are more than 5,000 feet of quayage for ocean going vessels; all the docks have a depth of at least 23 feet at high water of the neap tide. Three additional basins have 7,000 feet of dock space for smaller vessels, and both these and the docks mentioned previously have mechanical lifting equipment and extensive storage sheds. In the summer of 1941 a blockship and five other sunken ships obstructed the entrance to the port, and permitted entrance of small vessels only.

(5) Le Havre.

The port of Le Havre, the principal Atlantic port of France, is an artificial development at the mouth of the Seine River. It has accomodations for the largest vessels in service and its 11½ miles of docks equipped with modern cranes can handle all types of vessels and cargoes. Its storage facilities include 59 warehouses, 5 cold storage warehouses, 1 stockyard, extensive coal bunkers, and tanks for 18,581,000 cubic yards of oil. Seven dry-docks and 2 floating docks are part of the port's equipment; one of the dry-docks can accomodate the largest liners, and the others can take large ocean vessels. Reports of war damage to the port vary, but it would appear that the docks are still in usable condition although dredging would have to be undertaken before large vessels could enter the port. Since June, 1940, the port has scarcely been used.

(6) Rouen.

Rouen is located on the Seine River 78 miles from the sea, but it is accessible at all times to ocean-going vessels drawing up to 19 feet 8 inches. The maritime port extends for 11 miles below the Boieldieu Bridge and has accomodations for about 150 ships at one time at 21,000 feet of quays with a minimum depth of 27 feet 3 inches at low tide. The port is well provided with cranes and warehouses and has limited repair facilities.

(7) Cherbourg.

Cherbourg is an important Atlantic port located on the northern end of the Contentin peninsula. Its inner and outer roadsteads provide good shelter for vessels of any size in 42 feet and 30 feet of water respectively. There are two deep-water quays in the roadstead which can accomodate the largest liners, and in the inner harbor and a protected basin there are 8,000 feet of docks for smaller vessels. Handling, storage, and repair facilities were extensive before the outbreak of the war, but the docks and buildings have been damaged by bombings.

(b) Atlantic Coast.

(1) Brest.

Located on the western coast of Brittany, Brest is the most western of French ports but is of secondary commercial importance. The harbor has 6,700 feet of deep-water dock with a minimum depth of 24 feet 8 inches at low tide and provided with mechanical unloading equipment. The Germans are reported to have increased the facilities of the port by the enlargement of one dry-dock and the construction of another, and by construction of 5 shelter pens for submarines, camouflaged oil tanks, and store and repair shops. The port has, however, suffered from bombings.

(2) Nantes.

Nantes is located on the Loire estuary 35 miles from the sea. The river channel can be used even at the lowest water by vessels drawing up to 23 feet. The port has more than 17,000 feet of docks and 1,071,000 square feet of covered storage space, and all the docks are equipped with mechanical cranes.

(3) Bordeaux.

The city of Bordeaux and the principal part of the port are located on the Garonne River 61 miles from the sea, but the autonomous port also includes the installations at Blaye and Pauillac, the petroleum port at Bec d'Ambes, and the maritime station at Le Verdon, all located between Bordeaux and the ocean. A dredged channel enables vessels drawing up to 26 feet 3 inches to reach Bordeaux at all times. Bordeaux proper has 30,480 feet of quays on both sides of the river, all well-equipped with cranes and provided with 27 acres of covered storage space. Bec d'Ambes is an oil port 43 miles from the sea; it can accomodate tankers drawing up to 29 feet 6 inches. Blaye and Pauillac, located on the Gironde, the estuary of the Garonne, are respectively 38 and 30 miles from the ocean; the former has 820 feet of quay for vessels drawing 24 feet 5 inches, and the latter 2,327 feet for vessels of 32 feet draught. The ocean port of Le Verdon, at the mouth of the Gironde, consists of a jetty 1,236 feet long with a minimum depth alongside of 36 feet on the land side and 49 feet on the river side. Railroad and auto-roads lead directly onto the jetty.

(c) Mediterranean Coast.

(1) Sète.

Sète is located on the Mediterranean Sea and the Étang de Thau, and its port, composed of a series of canals and basins, has accomodations for small ocean-going vessels at 17,000 feet of dock. All the docks except one have depths alongside of at least 21 feet. There is but little mechanical loading equipment at the port, and there are no dry-docks.

(2) Marseille.

Marseille is the largest French maritime port in terms of tonnage handled. The harbor is an artificial development, except for the Vieux Port now used principally by fishing boats, created by the construction of a breakwater, basins, and quays along the water front. At present there are 13 miles of docks in the port with accomodation for the largest vessels of the Mediterranean. All except the Vieux Port are provided with modern cranes and storage sheds, and there are 39 miles of railroad line laid on the quays. Seven dry-docks at the port will take vessels up to 698 feet in length. The annexed port of Port-de-Bouc has an additional 8,000 feet of dock with depths alongside from 9 feet 6 inches to 29 feet 6 inches.

(3) Toulon.

Toulon is the principal French naval base on the Mediterranean coast. Most of the port is devoted to naval installations, but there are also 4,000 feet of commercial docks.

37. Commercial Aviation

The French commercial aviation system has been considerably reduced in its activities, and, in general, is subject to the direction and control of the German Armistice Commission at Aix.

Air France which formerly was the great French commercial aviation company in France is now called, according to reports, Réseau Aérien Français. Other pre-war firms were Air Afrique, Compagnie Aéro-Maritime des chargeurs Réunis and Air Bleu. It is possible, but not certain, that these systems are now integrated with Air France in the new Réseau Aérien Français. The managing director is reported to be General Pujo with the head office in the hotel "La Reserve" in Marseille, with other central offices located in Vichy, Carcassonne, and a new one in Paris headed by M. Jean Brun, an official of some note, who is collaborating with the German commercial airline Lufthansa. In December of 1941 the Vichy Government cancelled all agreements formerly existing between French republican governments and Air France, which leaves the present government free to dispose of what remains of the old company in a manner suitable to its interests. Under this law, state subsidies can be granted in cash, in loans, in guarantees, or by supplying flying equipment. The Secretary of State for Finance must concur in the granting of domestic subsidies, and the Secretary of State for the Navy as regards overseas services. Basic operating contracts may be for a maximum period of fifteen years, route approvals for ten years, and mail contracts for five years.

Under the terms of the Franco-German Armistice Convention, France is prohibited from allowing her air lines to fly over or into foreign countries; but regular air mail services are run from Marseille to about 13 towns in unoccupied France, and about 8 tons of mail are reported to be carried monthly by Caudron-Goeland planes. These planes also fly over routes going to Tunis in North Africa and Wiesbaden in Germany. Passenger service is reported to consist, at present, of a two-way circuit with planes leaving once a day in each direction between Vichy-Toulouse-Marseille-Lyon and Vichy. Recent reports (March, 1942) indicate that, after much persuasion on the part of the Germans a commercial airline has been opened up between Vichy and Paris, and it is also claimed that the personnel of the Réseau Aérien Français is entirely French.

(See Appendix for a short description of the French commercial aviation system before the war, and a list of pre-war air routes. This pre-war system may well be the basis for a reconstruction of French commercial aviation in the post-war period).

38. Commerce

a. Exports

(1) Pre-war position.

(a) Export markets.

In a normal pre-war year (1937) French exports were distributed principally among the following countries:

	Value	Percentage of total
Algeria	$131,360,000	13.8
Belgium and Luxembourg	125,607,000	13.1
Great Britain	108,665,000	11.4
United States of America	61,326,000	6.4
Switzerland	57,760,000	6.0
Germany	56,501,000	5.9
Tunisia	31,898,000	3.3
Indo-China	29,527,000	3.1
French West Africa	22,058,000	2.3
French Morocco	19,289,000	2.0

(b) Exports.

The total value of French exports in 1937 was $955,974,000. Classified by commodity groups they were as follows:

	Percentage of total
Foodstuffs and beverages	14.1
Raw materials and partially manufactured articles	35.2
Manufactured articles	50.7

The principal French commodities exported in 1937 were as follows:

	Value
Iron and steel (pigs, bars, billets, etc.)	$71,148,000
Wool (all types)	67,355,000
Chemicals, dyes	64,253,000
Cotton fabrics	42,425,000
Machinery	36,820,000
Metal products	31,503,000
Iron ore	30,906,000
Wine	28,786,000
Vegetable oils	24,692,000
Automobiles	24,584,000
Hides and skins	24,019,000

1470

(2) Present position.

(a) Export markets.

France now exports almost exclusively to Germany, but some export trade has been maintained with other European countries. Trade with Switzerland is relatively unrestricted, and in 1941 French exports to that country were valued at $11,799,000. Exports from France also continued to reach Spain, Portugal, Sweden, and the Balkan countries in 1941.

(b) Exports.

The total value of exports in 1941 was $322,000,000. Exports to Germany included foodstuffs, wine, iron ore, bauxite and aluminum, and raw wool. Switzerland obtained wine, chemical products, metals, silk. Spain, Portugal, Sweden, and the Balkans received chemical and pharmaceutical products, optical goods, wine, and perfume.

b. Imports

(1) Pre-war position.

(a) Sources of imports.

In a normal pre-war year (1937) the countries from which France imported for consumption most extensively were as follows:

	Value	Percentage of total
United States of America	$160,713,000	9.5
Algeria	152,674,000	9.0
Great Britain	135,804,000	8.0
Germany	130,478,000	7.7
Belgium and Luxembourg	122,853,000	7.2
French Indo-China	66,382,000	3.9
French West Africa	60,664,000	3.6
Australia	50,928,000	3.0
Switzerland	32,684,000	1.9

(b) Imports.

The total value of all French imports for consumption in 1937 was $1,700,281,000. Classified by commodity groups they are as follows:

	Percentage of total
Foodstuffs and beverages	23.3
Raw materials and partially manufactured articles	59.4
Manufactured Articles	15.3

The principal commodities imported in 1937 were as follows:

	Value
Coal and coke	$194,846,000
Petroleum and petroleum products	122,399,000
Wines	95,108,000
Wool (in bulk and in the skin)	93,338,000
Oilseeds	92,781,000
Cotton (raw)	82,998,000
Machinery	67,028,000
Chemicals	41,954,000
Wood	41,746,000
Coffee	39,930,000

(2) Present position.

(a) Sources of imports.

France still maintains a flow of imports from several European countries and from her colonies, and from a few non-European countries. Germany, Switzerland, Italy, Spain, Portugal, Sweden, and the Balkans export to France, and through the port of Marseille come products from French African colonies, Indo-China, the French West Indies, and South America.

(b) Imports.

The total value of French imports in 1941 was $552,000,000. Imports from Germany included petroleum, petroleum products, and sugar, and potash from Alsace-Lorraine. From Spain and Portugal came fruits and vegetables and other foodstuffs; from Sweden, cellulose and newsprint; from the Balkans foodstuffs; from Switzerland, cattle, foodstuffs, and woodpulp; from Italy, sulphur; from South America, coffee, foodstuffs, and textile materials. The colonies sent foodstuffs, cattle, fertilizers, rubber, skins and hides, fuels, and minerals. Not all these imports reached French consumers, however, for a large percentage was requisitioned by the Germans and transhipped to German markets.

c. Importance of foreign trade to French economic life.

Foreign trade is essential to the economic existence of Metropolitan France. The country is not wholly self-sufficient in food, and it lacks many strategically and industrially important materials. Fats and vegetable oils, sugar, maize, and rice must be imported in order to maintain an adequate diet for the population. Rubber, all textile materials except flax, timber, and all industrial minerals except iron ore, bauxite, and potash must be imported if industry is to operate. On the other hand France has the resources to build up foreign exchange. The nation has an export surplus of iron ore, bauxite, and potash, and produces sufficient wine of certain varieties for export; and her manufactured articles find markets in all parts of the world.

39. Communications

The postal, telephone and telegraphic services are organized under what has normally been the Ministry of Posts, Telephones and Telegraphs (at present the Secretaryship of State for Communications) not only for administrative purposes but also for all practical purposes. This is due to the fact that the post office has become a center of communications in many communities, and it is there that not only is the mail expedited, but telegraphic messages are sent and received, and a telephone switchboard and public telephones are maintained. There are 200,000 persons employed in the office of the P.T.T. (Posts. Telephones, and Telegraphs); the Petain government has, according to reports, reorganized the central administration, suppressed useless committees, decentralized certain sections, and "classified" the role and the power of the General Inspector. There are reported to be a new regional director for mail, and a regional chief-engineer for telecommunications, who is invested with "real power". However, the P.T.T. is reported to be considerably hampered by the demarcation line, for it appears to be greatly overloaded in the unoccupied zone, and subjected to an overwhelming number of restrictions in the occupied area.

In 1937 France had 1,550,267 telephones in service, and 564,881 miles of aerial non-insulated wires in service, as well as 632,152 miles of cables. Also included are 3,428 miles of what are termed underwater cables. This reaches a grand total of 1,200,461 miles of telephone wire, and in 1938 there were reported to be in existence 28,242 central switchboards.

The French net work is divided into four zones, each of which includes a number of departments, as shown below:

1st Zone: - Aisne, Ardennes, Meurthe-et-Moselle, Meuse, Moselle, Nord, Pas-de-Calais.

2nd Zone: - Aube, Eure, Marne (Haute), Oise, Rhin (Bas), Rhin (Haut), Saône (Haute), Territoire de Belfort, Seine, Seine-et-Oise, Seine-et-Marne, Seine-Inférieure, Somme, Vosges.

3rd Zone: - Ain, Allier, Calvados, Cher, Côte-d'Or, Creuse, Doubs, Eure-et-Loire, Indre, Indre-et-Loire, Ille-et-Vilaine, Jura, Loire, Loiret, Loir-et-Cher, Maine-et-Loire, Manche, Mayenne, Nièvre, Orne, Puy-de-Dôme.

4th Zone: - Other departments not included in the first three zones.

In December 1937 there were reported to be 7,860 fully equipped centralized post offices in France; and at the same time there were in existence 9,254 second-class post offices, which are described as being postal receiver offices, postal agencies, and auxiliary establishments. At the same time, 5,707,516,000 objects of correspondance are reported to have been handled. In 1938, 39,795 telegraph offices were in activity, while there were 324,878 miles of telegraphic lines in existence.

During the hostilities of 1940, 110 P.T.T. buildings were entirely destroyed; and 190 were seriously damaged. At present, 113 are reported to be repaired, and others replaced by temporary installations. It was claimed that 155 miles of telephone lines were destroyed, but it is now reported that they have been restored to use and that the postal and telephone services are functioning in all the post offices. It is also claimed that the number of important automatic telephone centrals destroyed was 28. Of that number, 20 are permanently restored and 7 have been given temporary installations. Apart from the others, 3,542 less important telephone installations were destroyed, of which 3,315 are permanently repaired.

French broadcasting stations are of two categories - those which are government owned and those privately owned. Before the armistice of 1940 the government stations were operated by the Ministry of Posts, Telephones and Telegraphs and were supported by the proceeds of license fees, while the private stations were operated on a basis somewhat similar to that in the United States with the aid of advertising. There were 5,104,689 receiving sets in France in 1940.

Today all occupied zone broadcasts in France are 100% Nazi controlled. It is claimed that Otto Abetz is the liason officer between the Nazi command and the Paris station, while Krug von Nidda, German Consul General in Vichy, is in continual touch with Abetz's staff in Paris for the policy-shaping of Radio-Paris. Marcel Déat, French collaborationist, is reported to be the French Nazi agent for Radio-Paris.

Government-Owned Stations

Name	Wave-length meters	Power watts	Frequency kilocycles
Radio-Paris	1,648	80,000	182
Paris P.T.T.	432	120,000	195
Tour Eiffel, Paris	206	20,000	1,458
Bordeaux-Lafayette	279	30,000	1,077
Alpes-Grenoble	515	15,000	583
Lille, P.T.T.	247	60,000	1,213
Limoges, P.T.T.	335	1,000	895
Lyon, P.T.T.	463	100,000	648
Marseille-Provence	400	100,000	749
Montpellier-Languedoc	224	5,000	1,339
Nice-Côte d'Azur	253	60,000	1,185
Renan-Bretagne	289	120,000	1,040
Strasbourg, P.T.T.	349	100,000	859
Toulouse-Pyrenées	387	120,000	776

Paris-Mondial	Wave Length, meters	Direction
	25.24, 31.51, and 25.00	North and South America
	30.99 and 25.24	Africa and Syria
	16.88, 19.83, and 25.23	Far East and Madagascar
	19.83, 25.33, and 25.24	Réunion
	41.21 and 31.51	

Private Stations

City	Frequency in kilocycles	Power in watts
Bordeaux (Sud Ouest)	1,366	75,000
Paris (Ile de France)	1,276	2,000
Paris (Poste Parisien)	959	60,000
Azin	963	2,000
Paris (Radio-Cité)	1,068	20,000
Lyon (Radio-Lyon)	1,393	25,000
Juan Les Pins	1,321	25,000
Montpellier (Radio-Montpellier)	968	2,000
Nîmes (Radio-Nimes)	1,483	2,000
Fécampe (Radio-Normandie)	1,095	20,000
Toulouse (Radio-Toulouse)	913	60,000
Paris (Radio 37)	832	2,000

Short Wave Stations

(Paris-Mondial)

City	Frequency in kilocycles	Power in watts
Allouir (Bourges)	9,680	
	11,845	100,000
	15,295	
	17,850	

Call Letters

Pontoise	TPA2	15,243	
	TPA3	11,885	12,000
	TPA4	11,718	

Short Wave Stations
(cont.)

City	Call Letters	Frequency in kilocycles	Power in Watts
Essarts-le-Roi	TPB3	17,765	
	TPB6	15,130	25,000
	TPB7	11,885	
	TPB12	9,550	
	TPB25	7,280	

Television Station

Paris		46 mc. (image)	25,000
(Station d'État)		42 mc. (sound)	

40. Finance

a. Rate of exchange

The basic unit of French currency is the franc. Its average value in 1939 in the currency of the United States was $0.025. At present it is officially fixed at $0.02 in the occupied zone and $0.023 in the unoccupied zone, but on uncontrolled markets it is worth only about $0.0067 and has been quoted below $0.005.

b. Currency

The French monetary unit is the franc, which contains 100 centimes. Coins and notes are issued in various multiples of these units.

(1) Notes

Paper notes are issued exclusively by the Bank of France in the following denominations and sizes:

Denominations	Dimensions
5,000 francs	--
1,000 "	9.2" x 5.1"
500 "	9.6" x 5.5"
100 "	7.2" x 4.4"
50 "	6.1" x 3.5"
20 "	(First issued, Dec. 16, 1940)

The issue of 5,000 franc notes has been almost entirely suspended; all payments of more than 3,000 francs must now be made by check or bank transfer, so the 5,000 franc notes are practically unusable.

(2) Coins

Coins are issued by the government in the following denominations:

Denomination	Metal	Diameter (inches)	Special Characteristics
20 francs	Silver	1.3	
10 "	"	1.1	
5 "	Nickel	.9	
5 "	--	--	First issued in 1941; bears profile of Marshal Petain and motto "Travail, Famille, Patrie".
2 "	Alloy of aluminum and copper	1.1	
1 "	Alloy of aluminum and copper	0.9	To be replaced in spring of 1942 by aluminum coins.
1 "	Aluminum	.9	To be issued in the spring of 1942.
50 centimes	Alloy of Aluminum and copper	.7	To be replaced in spring of 1942 by aluminum coins.
50 "	Aluminum	.7	To be issued in spring of 1942.
25 "	Alloy of copper and nickel	.9	Hole in center.
25 "	Alloy of copper, zinc and nickel	.9	
20 "	--	--	Ordered coined by law of March 26, 1941.
10* "	Alloy of copper and nickel	.8	Hole in center. Replaced by zinc coins since Armistice of 1940.
10* "	Alloy of copper, zinc and nickel	.8	Replaced by zinc coins since Armistice of 1940.
10 "	Zinc or zinc alloyed with aluminum or copper	.8	First issued since Armistice of 1940.
5* "	Alloy of copper and aluminum	.7	Hole in center.
5* "	Alloy of copper, zinc, and nickel	.7	

Denomination	Metal	Diameter (inches)	Special Characteristics
2* centimes	Bronze	.8	
1* centime	Bronze	.6	

* Officially withdrawn from circulation.

(3) Chamber of Commerce Tokens

The Chambers of Commerce formerly issued tokens in denominations of 2 francs, 1 franc, and 50 centimes, acceptable as legal tender, and they are presumably still in circulation. They are made of an alloy of aluminum and copper and are the same size as the coins of corresponding denominations issued by the government.

(4) German currency in use in France

(a) "Occupation marks"

After the invasion of France the German Government established a special bank of issue, the Reichskreditkasse, to issue currency for use of the German Army and German civil officials in the occupied territory of France. It issued notes (Reichskreditkassenscheine) in denominations of 2,5, and 20 Reichsmarks, and 5 and 10 pfennig coins, which were declared to be legal tender in France at a rate of exchange of 20 francs to the Reichsmark. The notes and coins are non-negotiable in Germany or in German-occupied countries other than France.

(b) Army notes

The German Army issued in France, a form of promissory notes (Wehrmachtsverpflichtungs scheine) in denominations of 50,000 Reichsmarks and larger for use in making large purchases. They are non-convertible into German or other currencies and non-negotiable in Germany and [illegible]her German-occupied territories.

(5) Currency in Alsace-Lorraine

Since May 1, 1941, French currency has been illegal in Alsace-Lorraine.

c. Budget

The French budget for 1941 provided for expendituresof $3,060,000,000 and anticipated receipts of $1,550,000,000. The expenditures did not include the costs of the German occupation, which amounted to $2,930,000,000. in 1941.